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**ACIDIC PRECIPITATION
IN ONTARIO STUDY**

**ANNUAL STATISTICS OF
CONCENTRATION AND DEPOSITION
-CUMULATIVE PRECIPITATION SITES
IN INDUSTRIAL/URBAN AREAS
IN ONTARIO**

January 4, 1983 - January 15, 1985

ARB-004-87-AQM

APIOS-001-87

APRIL 1987



**Ministry
of the
Environment**

**E. PICHÉ, Director
Air Resources Branch**

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- CUMULATIVE PRECIPITATION SITES IN INDUSTRIAL/URBAN
AREAS IN ONTARIO, JANUARY 4, 1983 - JANUARY 15, 1985**

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TABLE OF CONTENTS

		<u>Page</u>
PART I	INTRODUCTION	III
PART II	STATION DESCRIPTION AND LOCATION MAP	V
PART III	SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION For 1983	
	<u>Station</u>	<u>Map Ref. No.</u>
	Binbrook	01
	Burwash	07
	Canborough	02
	Dog's Nest East	03
	Germain Park	10
	Hanmer	08
	Lively	09
	North Dufferin	04
	South Canfield	05
	Toronto	11
	Villa Nova	06
		1
		3
		5
		7
		9
		11
		13
		15
		17
		19
		21
PART IV	SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION For 1983	
	Haldiman-Norfolk (NEMP) Region	23
	Sudbury Region	25
PART V	SUMMARY STATISTICS OF WET DEPOSITION BY STATION For 1983	
	<u>Station</u>	<u>Map Ref. No.</u>
	Binbrook	01
	Burwash	07
	Canborough	02
	Dog's Nest East	03
	Germain Park	10
	Hanmer	08
	Lively	09
	North Dufferin	04
	South Canfield	05
	Toronto	11
	Villa Nova	06
		27
		29
		31
		33
		35
		37
		39
		41
		43
		45
		47
PART VI	SUMMARY STATISTICS OF WET DEPOSITION BY REGION For 1983	
	Haldimand-Norfold (NEMP) Region	49
	Sudbury Region	51

**PART VI SUMMARY STATISTICS OF PRECIPITATION
CONCENTRATION BY STATION For 1984**

<u>Station</u>	<u>Map Ref. No.</u>	
Burwash	07	53
Dog's Nest East	03	55
Germain Park	10	57
Hanmer	08	59
Lively	09	61
North Dufferin	04	63
Toronto	11	65

**PART VIII SUMMARY STATISTICS OF PRECIPITATION
CONCENTRATION BY REGION For 1984**

Haldiman-Norfolk (NEMP) Region	67
Sudbury Region	69

**PART IX SUMMARY STATISTICS OF WET DEPOSITION
BY STATION For 1984**

<u>Station</u>	<u>Map Ref. No.</u>	
Burwash	07	71
Dog's Nest East	03	73
Germain Park	10	75
Hanmer	08	77
Lively	09	79
North Dufferin	04	81
Toronto	11	83

**PART X SUMMARY STATISTICS OF WET DEPOSITION
BY REGION For 1984**

Haldimand-Norfolk (NEMP) Region	85
Sudbury Region	87

PART I

INTRODUCTION

- III -
INTRODUCTION

The statistical summaries presented in this report pertain to the 1983 and 1984 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) cumulative precipitation sites in industrial and urban areas in Ontario. The relevant data can be obtained on request from the Air Resources Branch of The Ontario Ministry of the Environment⁽¹⁾. All available data are utilized in the calculations except results reported as being unreliable (i.e., results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedures is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as maybe encountered in calibration, or when the sample cannot be re-analyzed to confirm the reported value). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. Reported results for metals which have missing leachate analysis are also excluded from statistical analysis. Results labelled as $< W$ are replaced by "zero". W is the level which the analytical technique cannot distinguish from zero. If a level is recorded less than the detection limit T , a value corresponding to one half the detection limit is utilized for statistical calculations as reported in the statistical summaries. Note that T is normally about ten times W , and values above the T criteria are considered to be precise and accurate.

The reported cumulative precipitation gauge depth (or an interpolated value from Environment Canada's CLIMAT data) is utilized in the calculation of deposition. If a precipitation gauge value is not available, then the collected sample volume is converted to its equivalent precipitation depth and is used in the deposition calculation.

The statistical summaries presented in Parts III to V include number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum, quartiles and precipitation weighted means using precipitation gauge depths where appropriate. These statistics are for an average sampling period. Data which correspond to irregular sampling periods were either combined if they are from consecutive collection periods which span $28d \pm 5d$, or deleted, before the statistics are generated.

(1) APIOS Cumulative (28 Day) Precipitation Chemistry Listings of Sites in Industrial/Urban Areas in Ontario, January 4, 1983 - January 15, 1985.

The regional statistics summaries are presented for only two regions (i.e. Haldimand-Norfolk Region and Sudbury Region), since data for the remaining stations is insufficient for regional representation.

6APS4

PART II

STATION DESCRIPTION AND LOCATION MAP



SITE DESCRIPTIONS OF STATIONS IN INDUSTRIAL/URBAN AREAS

<u>MOE REGION</u>	<u>STATION NAME</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>UTM GRID CO-ORDINATES</u>	
		(North)	(West)	(Northing)	(Easting)
Haldimond- Norfolk (NEMP)	Binbrook	43°07'06"	79°52'40"	4774500	591400
	Canborough	42°59'77"	79°38'42"	4760800	611950
	Dog's Nest East	41°48'40"	80°08'46"	4739600	570200
	North Dufferin	42°59'39"	79°58'38"	4759990	583750
	South Canfield	42°55'39"	79°44'49"	4752700	602600
	Villa Nova	42°55'39"	80°12'13"	4753500	565400
Sudbury	Burwash	46°15'46"	80°48'48"	5123000	514600
	Hanmer	46°39'45"	80°56'37"	5167400	504300
	Lively	46°26'45"	81°09'00"	5143400	488400
Other Sites	Germain Park	42°58'35"	82°23'00"	4758750	387250
	Toronto	43°39'15"	79°23'14"	4835500	630100

PART III

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION

1983



ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.03 TO JAN 3.04

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAXIMUM	13	10	11	11	11	11	11
MINIMUM	160.0	65.0	4.77	0.0891	0.1230	9.30	0.950
RANGE	11.0	18.6	4.05	0.0170	0.0157	1.85	0.350
ARITH. MEAN	149.0	46.4	0.72	0.0721	0.1073	7.45	0.800
ARITH. STD. DEV.	66.8	38.2	4.35	0.0512	0.0774	4.88	0.655
GEOM. MEAN	38.8	13.8	0.25	0.0253	0.0344	1.98	0.226
GEOM. STD. DEV.	55.4	36.0	4.34	0.0450	0.0681	4.53	0.618
1ST QUANTILE	2.0	1.5	1.06	1.7591	1.8165	1.52	1.439
2ND QUANTILE	38.7	26.0	4.09	0.0253	0.0492	3.45	0.425
3RD QUANTILE	64.0	36.6	4.31	0.0417	0.0688	4.52	0.550
VOL. WGT. MEAN	75.6	44.2	4.45	0.0695	0.1042	5.22	0.860
	*****	37.5	*****	0.0522	0.0824	4.77	0.596

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
MAXIMUM	10	11	12	10	10	10	11
MINIMUM	1.180	1.760	3.100	0.360	0.140	0.575	1.420
RANGE	0.420	0.130	0.170	0.090	0.020	0.025	0.040
ARITH. MEAN	0.760	1.830	2.930	0.270	0.120	0.550	1.380
ARITH. STD. DEV.	0.747	0.501	0.862	0.210	0.055	0.189	0.531
GEOM. MEAN	0.297	0.405	0.781	0.099	0.035	0.202	0.348
GEOM. STD. DEV.	0.693	0.361	0.668	0.188	0.048	0.112	0.415
1ST QUANTILE	1.508	2.231	2.033	1.649	1.771	3.001	2.416
2ND QUANTILE	0.435	0.195	0.480	0.113	0.030	0.042	0.336
3RD QUANTILE	0.660	0.245	0.635	0.192	0.092	0.092	0.435
VOL. WGT. MEAN	1.030	0.665	0.845	0.280	0.067	0.238	0.565
	0.648	0.410	0.631	0.176	0.054	0.145	0.491

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.83 TO JAN 3.84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	11	11	10	10	10	11
MAXIMUM :	0.0620	36.00	1.00	43.10	261.10	25.20	1.00
MINIMUM :	0.0070	4.00	0.50	4.27	23.68	4.31	1.00
RANGE :	0.0550	32.00	0.50	38.83	237.42	20.89	0.00
ARITH. MEAN :	0.0243	11.36	0.55	14.70	116.39	13.07	1.00
ARITH. STD. DEV. :	0.0166	8.97	0.15	11.08	82.40	6.89	0.00
GEOM. MEAN :	0.0198	9.31	0.53	12.06	92.62	11.36	1.00
GEOM. STD. DEV. :	1.9740	1.87	1.23	1.90	2.09	1.78	1.00
1ST QUANTILE :	0.0135	5.00	0.50	7.19	54.44	7.03	1.00
2ND QUANTILE :	0.0200	8.50	0.50	12.11	92.70	12.66	1.00
3RD QUANTILE :	0.0325	12.50	0.50	15.56	124.50	17.60	1.00
VOL. WGT. MEAN :	0.0183	8.25	0.51	10.11	91.26	10.13	1.00

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	10	10	11
MAXIMUM :	241.60	7.05	0.20
MINIMUM :	30.84	0.73	0.05
RANGE :	210.76	6.32	0.15
ARITH. MEAN :	100.45	2.22	0.09
ARITH. STD. DEV. :	64.60	1.90	0.06
GEOM. MEAN :	84.75	1.72	0.07
GEOM. STD. DEV. :	1.84	2.07	1.77
1ST QUANTILE :	53.94	0.81	0.05
2ND QUANTILE :	75.70	1.72	0.05
3RD QUANTILE :	121.94	2.49	0.10
VOL. WGT. MEAN :	87.73	1.58	0.06

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5.83 TO DEC 6.83

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
12	12	11	12	12	12	12	12
MAXIMUM	130.0	122.0	4.57	0.2138	0.2730	14.20	1.230
MINIMUM	24.0	10.5	3.67	0.0269	0.0447	2.55	0.240
RANGE	106.0	103.5	0.90	0.1869	0.2283	11.65	0.990
ARITH. MEAN	60.6	44.8	4.20	0.0743	0.1062	4.31	0.587
ARITH. STD. DEV.	36.6	28.2	0.24	0.0512	0.0598	3.28	0.322
GEOM. MEAN	51.7	39.6	4.19	0.0632	0.0952	3.71	0.519
GEOM. STD. DEV.	1.8	1.6	1.06	1.7566	1.5859	1.64	1.655
1ST QUARTILE	31.3	30.6	4.11	0.0483	0.0771	2.70	0.350
2ND QUARTILE	45.8	33.8	4.22	0.0610	0.0873	3.02	0.520
3RD QUARTILE	86.8	45.5	4.32	0.0767	0.1165	4.27	0.710
VOL. WGT. MEAN	*****	39.7	*****	0.0621	0.0932	3.76	0.494

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
12	12	12	12	12	12	12	12
MAXIMUM	0.630	1.310	1.820	0.140	0.130	1.150	1.450
MINIMUM	0.090	0.060	0.190	0.008	0.008	0.010	0.152
RANGE	0.540	1.250	1.630	0.140	0.122	1.140	1.298
ARITH. MEAN	0.198	0.378	0.537	0.036	0.044	0.285	0.457
ARITH. STD. DEV.	0.152	0.440	0.431	0.037	0.036	0.390	0.349
GEOM. MEAN	0.166	0.240	0.447	0.042	0.031	0.117	0.380
GEOM. STD. DEV.	1.781	2.538	1.780	1.965	2.486	4.347	1.805
1ST QUARTILE	0.105	0.140	0.320	0.020	0.017	0.045	0.267
2ND QUARTILE	0.140	0.225	0.400	0.025	0.037	0.120	0.337
3RD QUARTILE	0.250	0.315	0.565	0.035	0.062	0.325	0.535
VOL. WGT. MEAN	0.172	0.271	0.465	0.033	0.038	0.178	0.395

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5.83 TO DEC 6.83

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12	11	11	11	12
MAXIMUM	0.0390	12.00	15.00	20.56	182.00	21.55	1.00
MINIMUM	0.0005	1.00	0.50	4.29	30.80	6.14	1.00
RANGE	0.0385	11.00	14.50	16.27	151.20	15.41	0.00
ARITH. MEAN	0.0107	2.92	2.08	8.10	78.77	10.34	1.00
ARITH. STD. DEV	0.0106	3.00	4.14	5.13	54.06	5.23	0.00
GEOM. MEAN	0.0068	2.21	0.92	7.09	64.52	9.42	1.00
GEOM. STD. DEV.	3.0506	2.01	2.94	1.64	1.91	1.53	1.00
1ST QUARTILE	0.0050	1.50	0.50	5.02	36.64	6.78	1.00
2ND QUARTILE	0.0085	2.00	0.50	5.61	50.06	7.75	1.00
3RD QUARTILE	0.0105	3.00	1.50	8.25	120.10	11.48	1.00
VOL. WGT. MEAN	0.0101	2.37	1.51	6.55	67.75	8.49	1.00

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	12
MAXIMUM	106.30	23.55	0.60
MINIMUM	20.22	0.80	0.05
RANGE	86.08	22.75	0.55
ARITH. MEAN	50.77	4.55	0.20
ARITH. STD. DEV	27.93	6.46	0.21
GEOM. MEAN	44.47	2.80	0.12
GEOM. STD. DEV.	1.71	2.50	2.65
1ST QUARTILE	26.44	1.27	0.05
2ND QUARTILE	37.26	2.33	0.10
3RD QUARTILE	66.01	3.72	0.25
VOL. WGT. MEAN	49.55	3.48	0.15

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
13	13	12	13	13	13	12	13
MAXIMUM	161.0	61.0	7.64	0.0933	0.1040	7.20	1.160
MINIMUM	19.0	18.4	4.03	0.0000	0.0146	2.40	0.350
RANGE	142.0	42.6	3.61	0.0933	0.1694	4.80	0.810
ARITH. MEAN	77.9	37.6	4.67	0.0421	0.0745	4.54	0.643
ARITH. STD. DEV.	38.6	14.0	0.94	0.0274	0.0427	1.57	0.260
GEOM. MEAN	67.8	35.1	4.60	0.0215	0.0636	4.28	0.601
GEOM. STD. DEV.	1.8	1.5	1.18	8.7156	1.8589	1.44	1.451
1ST QUARTILE	45.5	25.3	4.27	0.0251	0.0471	3.20	0.460
2ND QUARTILE	75.9	37.1	4.37	0.0352	0.0621	4.67	0.575
3RD QUARTILE	93.5	47.4	4.53	0.0531	0.0860	5.35	0.630
VOL. WGT. MEAN	*****	34.5	*****	0.0402	0.0722	4.52	0.562

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
13	13	13	13	13	12	13	13
MAXIMUM	2.200	0.610	3.250	0.720	0.685	0.295	1.430
MINIMUM	0.200	0.130	0.580	0.055	0.000	0.000	0.018
RANGE	2.000	0.480	2.670	0.665	0.685	0.295	1.412
ARITH. MEAN	0.570	0.288	1.224	0.165	0.124	0.089	0.816
ARITH. STD. DEV.	0.515	0.157	0.750	0.176	0.212	0.077	0.383
GEOM. MEAN	0.461	0.253	1.073	0.124	0.078	0.091	0.622
GEOM. STD. DEV.	1.830	1.690	1.652	2.001	3.040	2.102	3.046
1ST QUARTILE	0.305	0.165	0.760	0.077	0.027	0.030	0.580
2ND QUARTILE	0.440	0.215	0.835	0.100	0.040	0.075	0.740
3RD QUARTILE	0.525	0.350	1.320	0.145	0.062	0.095	0.985
VOL. WGT. MEAN	0.465	0.261	1.107	0.127	0.116	0.081	0.726

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	13	13	12	12	12	13
MAXIMUM	0.1280	16.00	1.00	28.45	159.50	33.50	1.00
MINIMUM	0.0100	2.00	0.50	4.39	23.11	0.69	1.00
RANGE	0.1180	14.00	0.50	24.06	136.39	32.80	0.00
ARITH. MEAN	0.0293	5.23	0.54	11.31	73.23	10.64	1.00
ARITH. STD. DEV.	0.0357	3.59	0.14	6.95	38.88	8.35	0.00
GEOM. MEAN	0.0197	4.52	0.53	9.83	64.54	7.65	1.00
GEOM. STD. DEV.	2.2404	1.68	1.21	1.70	1.70	2.69	1.00
1ST QUARTILE	0.0115	3.00	0.50	7.31	44.58	6.54	1.00
2ND QUARTILE	0.0150	4.00	0.50	9.30	67.46	9.55	1.00
3RD QUARTILE	0.0230	5.00	0.50	12.29	86.98	13.20	1.00
VOL. WGT. MEAN	0.0241	4.47	0.54	10.40	63.32	10.23	1.00

CADMIUM

COPPER

ALUMINIUM

	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	13
MAXIMUM	126.80	3.57	0.20
MINIMUM	25.96	0.69	0.05
RANGE	100.84	2.88	0.15
ARITH. MEAN	65.28	1.65	0.08
ARITH. STD. DEV.	28.98	0.89	0.04
GEOM. MEAN	59.69	1.44	0.07
GEOM. STD. DEV.	1.56	1.72	1.58
1ST QUARTILE	44.40	0.90	0.05
2ND QUARTILE	57.68	1.37	0.05
3RD QUARTILE	90.85	2.27	0.10
VOL. WGT. MEAN	60.46	1.33	0.07

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.83 TO DEC 6.83

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CN	LAB	LAB	GRAM	MG/L	AS N
# OF SAMPLES	12	11	12	12	12	12	12
MAXIMUM	214.0	53.8	4.38	0.0955	0.1950	5.90	0.730
MINIMUM	30.0	23.4	4.02	0.0417	0.0422	2.30	0.300
RANGE	184.0	30.4	0.36	0.0538	0.1528	3.60	0.430
ARITH. MEAN	73.5	38.5	4.22	0.0620	0.0997	3.86	0.511
ARITH. STD. DEV.	50.4	9.8	0.12	0.0176	0.0393	1.20	0.139
GEOM. MEAN	62.8	37.3	4.22	0.0599	0.0931	3.70	0.492
GEOM. STD. DEV.	1.7	1.3	1.03	1.3125	1.4829	1.36	1.335
1ST QUARTILE	42.3	28.6	4.14	0.0497	0.0747	2.82	0.380
2ND QUARTILE	56.0	35.7	4.24	0.0575	0.0967	3.77	0.535
3RD QUARTILE	89.5	46.3	4.31	0.0724	0.1180	4.55	0.620
VOL. WGT. MEAN	*****	38.5	*****	0.0613	0.1055	3.88	0.480

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	0.520	0.540	1.030	0.100	0.070	0.135	0.690
MINIMUM	0.200	0.060	0.200	0.030	0.005	0.025	0.150
RANGE	0.320	0.480	0.830	0.070	0.065	0.110	0.540
ARITH. MEAN	0.374	0.207	0.457	0.066	0.038	0.069	0.354
ARITH. STD. DEV.	0.109	0.132	0.227	0.023	0.018	0.034	0.174
GEOM. MEAN	0.357	0.176	0.413	0.062	0.033	0.062	0.317
GEOM. STD. DEV.	1.389	1.826	1.586	1.477	1.999	1.667	1.836
1ST QUARTILE	0.275	0.135	0.305	0.042	0.027	0.050	0.223
2ND QUARTILE	0.400	0.170	0.445	0.072	0.040	0.055	0.353
3RD QUARTILE	0.455	0.260	0.510	0.082	0.050	0.085	0.425
VOL. WGT. MEAN	0.352	0.214	0.422	0.060	0.039	0.066	0.338

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12	11	11	11	12
MAXIMUM	0.0300	15.00	0.50	12.34	142.70	15.12	1.00
MINIMUM	0.0060	2.00	0.50	3.69	28.24	3.63	1.00
RANGE	0.0240	13.00	0.00	8.65	114.46	11.49	0.00
ARITH. MEAN	0.0126	6.33	0.50	7.09	64.47	9.48	1.00
ARITH. STD. DEV.	0.0069	3.47	0.00	2.30	31.09	4.36	0.00
GEOM. MEAN	0.0113	5.58	0.50	6.77	58.70	8.44	1.00
GEOM. STD. DEV.	1.5785	1.70	1.00	1.37	1.57	1.70	1.00
1ST QUARTILE	0.0085	4.50	0.50	5.47	39.39	4.98	1.00
2ND QUARTILE	0.0100	5.50	0.50	6.52	56.76	8.77	1.00
3RD QUARTILE	0.0150	7.50	0.50	8.05	74.58	13.06	1.00
VOL. WGT. MEAN	0.0113	6.17	0.50	6.76	58.35	9.54	1.00

CADMIUM

COPPER

ALUMINIUM

	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	12
MAXIMUM	122.40	2.45	0.20
MINIMUM	22.93	0.88	0.05
RANGE	99.47	1.57	0.15
ARITH. MEAN	57.59	1.74	0.08
ARITH. STD. DEV.	31.55	0.51	0.06
GEOM. MEAN	50.57	1.67	0.07
GEOM. STD. DEV.	1.71	1.37	1.73
1ST QUARTILE	29.63	1.33	0.05
2ND QUARTILE	49.11	1.54	0.05
3RD QUARTILE	67.94	2.22	0.07
VOL. WGT. MEAN	55.69	1.77	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.83 TO JAN 3.84

PAGE : 1

# OF SAMPLES	PRECIP.	CONDUCT.	PH	FREE H ⁺	TOTAL H ⁺	SULPHATE	NITRATE
:	MM	UMHO/CM	LAB	LAB	GRAM	MG/L	AS N
MAXIMUM	13	12	11	11	11	12	12
MINIMUM	119.5	105.0	7.70	0.0617	0.0902	25.33	2.960
RANGE	20.8	16.6	4.21	0.0000	0.0123	2.85	0.460
ARITH. MEAN	98.7	86.4	3.49	0.0616	0.0779	22.45	2.500
ARITH. STD. DEV	59.5	48.0	6.73	0.0082	0.0250	10.09	1.150
GEOM. MEAN	52.7	26.5	1.06	0.0185	0.0220	6.22	0.712
GEOM. STD. DEV.	1.7	1.8	6.64	0.0002	0.0209	8.53	0.986
1ST QUARTILE	36.6	31.3	1.20	11.5086	1.6989	1.85	1.766
2ND QUARTILE	53.1	44.4	5.99	0.0000	0.0154	5.95	0.610
3RD QUARTILE	66.3	56.5	7.01	0.0001	0.0175	7.92	1.035
VOL. WGT. MEAN	*****	41.6	7.24	0.0001	0.0223	12.90	1.440
			*****	0.0028	0.0204	8.91	0.984

# OF SAMPLES	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM
:	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
MAXIMUM	11	12	12	11	11	11	11
MINIMUM	9.000	3.140	3.350	1.750	0.230	0.760	1.410
RANGE	1.530	0.350	0.430	0.180	0.025	0.000	0.230
ARITH. MEAN	7.470	2.790	2.920	1.370	0.205	0.780	1.180
ARITH. STD. DEV	3.776	0.879	1.202	0.800	0.063	0.240	0.750
GEOM. MEAN	2.121	0.794	0.793	0.411	0.055	0.233	0.392
GEOM. STD. DEV.	3.317	0.686	1.018	0.717	0.071	0.232	0.649
1ST QUARTILE	1.701	1.968	1.811	1.627	1.803	2.051	1.802
2ND QUARTILE	1.835	0.375	0.705	0.430	0.045	0.087	0.358
3RD QUARTILE	3.250	0.590	1.060	0.707	0.065	0.155	0.630
VOL. WGT. MEAN	4.500	1.060	1.450	1.040	0.098	0.250	1.080
	3.447	0.705	1.086	0.747	0.074	0.166	0.692

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	9	9	8	8	8	9
MAXIMUM	0.0830	16.00	4.00	39.44	500.70	60.00	8.00
MINIMUM	0.0020	5.00	0.50	18.33	81.70	13.34	1.00
RANGE	0.0810	11.00	3.50	21.11	419.00	46.66	7.00
ARITH. MEAN	0.0227	9.89	1.61	27.04	248.69	33.34	4.67
ARITH. STD. DEV	0.0213	3.30	1.24	6.23	144.81	14.55	2.55
GEOM. MEAN	0.0158	9.37	1.22	26.44	213.59	30.40	3.86
GEOM. STD. DEV.	2.5776	1.43	2.23	1.25	1.82	1.61	2.06
1ST QUANTILE	0.0105	7.00	0.50	23.47	147.70	23.07	2.00
2ND QUANTILE	0.0175	10.00	1.00	26.70	203.55	33.14	4.50
3RD QUANTILE	0.0290	11.00	2.00	29.11	352.30	40.47	6.50
VOL. WGT. MEAN	0.0198	9.45	1.38	25.64	236.38	30.20	4.23

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	8	8	9
MAXIMUM	562.60	28.59	0.50
MINIMUM	78.36	5.14	0.05
RANGE	484.24	23.44	0.45
ARITH. MEAN	220.48	14.00	0.20
ARITH. STD. DEV	154.30	8.38	0.14
GEOM. MEAN	185.79	11.96	0.16
GEOM. STD. DEV.	1.82	1.83	2.17
1ST QUANTILE	130.00	7.42	0.07
2ND QUANTILE	171.80	11.67	0.20
3RD QUANTILE	259.65	20.03	0.20
VOL. WGT. MEAN	207.60	13.62	0.18

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HAMMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.03 TO JAN 3.84

PAGE : 1

# OF SAMPLES	PRECIP.		CONDUCT.	PH LAB	FREE H ⁺ LAB MG/L	TOTAL H ⁺ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM	MM	UMHO/CM					
MAXIMUM	13	113.0	10	11	11	11	11	12
MINIMUM			98.0	7.66	0.1585	0.2110	10.10	1.180
RANGE		16.1	38.4	3.80	0.0000	0.0758	3.25	0.020
ARITH. MEAN		96.9	59.6	3.86	0.1585	0.1352	6.85	1.160
ARITH. STD. DEV.		50.1	56.8	4.39	0.0827	0.1325	5.03	0.622
GEOM. MEAN		29.8	20.9	1.09	0.0414	0.0406	1.89	0.351
GEOM. STD. DEV.		42.0	54.0	4.30	0.0405	0.1271	4.79	0.459
1ST QUANTILE		1.9	1.4	1.21	12.4069	1.3528	1.37	2.985
2ND QUANTILE		22.0	41.3	3.94	0.0532	0.0963	3.63	0.355
3RD QUANTILE		42.7	49.8	4.06	0.0832	0.1235	4.73	0.675
VOL. WGT. MEAN		63.4	57.0	4.19	0.0978	0.1495	5.13	0.805
		*****	57.9	*****	0.0715	0.1234	4.89	0.471

# OF SAMPLES	CALCIUM		CHLORIDE	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
	MM	MM	MG/L					
MAXIMUM	11	12	12	12	11	11	11	10
MINIMUM			1.100	11.500	0.145	2.910	0.845	0.960
RANGE		0.110	0.000	0.310	0.015	0.008	0.015	0.264
ARITH. MEAN		0.370	1.100	11.190	0.130	2.902	0.830	0.896
ARITH. STD. DEV.		0.245	0.397	1.589	0.053	0.326	0.300	0.438
GEOM. MEAN		0.095	0.369	3.156	0.039	0.858	0.321	0.212
GEOM. STD. DEV.		0.230	0.323	0.744	0.044	0.071	0.133	0.404
1ST QUANTILE		1.449	2.601	2.768	1.899	4.543	4.471	1.488
2ND QUANTILE		0.175	0.105	0.410	0.027	0.027	0.027	0.297
3RD QUANTILE		0.235	0.260	0.490	0.040	0.050	0.085	0.363
VOL. WGT. MEAN		0.245	0.690	1.050	0.052	0.120	0.560	0.450
		0.228	0.284	1.839	0.051	0.385	0.215	0.514

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4.83 TO JAN 3.84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12	11	11	11	12
MAXIMUM	1.1900	37.00	45.00	128.30	1784.00	32.24	2.00
MINIMUM	0.0010	2.00	1.00	5.16	38.59	5.24	1.00
RANGE	1.1890	35.00	44.00	123.14	1745.41	27.00	1.00
ARITH. MEAN	0.1219	7.42	8.83	38.43	277.84	15.60	1.08
ARITH. STD. DEV.	0.3375	9.65	11.76	46.11	510.34	8.30	0.29
GEOM. MEAN	0.0196	4.98	5.51	19.90	129.07	13.86	1.06
GEOM. STD. DEV.	5.8130	2.25	2.61	3.33	2.98	1.73	1.22
1ST QUANTILE	0.0080	3.00	3.00	6.05	60.49	8.40	1.00
2ND QUANTILE	0.0165	4.00	6.50	12.28	88.23	13.02	1.00
3RD QUANTILE	0.0475	7.50	8.50	47.36	186.85	20.52	1.00
VOL. WGT. MEAN	0.1508	5.14	6.66	28.92	158.78	12.63	1.03

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	12
MAXIMUM	731.30	68.85	2.80
MINIMUM	31.69	3.45	0.10
RANGE	699.61	65.40	2.70
ARITH. MEAN	150.59	15.81	0.86
ARITH. STD. DEV.	209.35	18.20	0.93
GEOM. MEAN	90.31	11.18	0.56
GEOM. STD. DEV.	2.52	2.21	2.55
1ST QUANTILE	46.87	5.27	0.40
2ND QUANTILE	61.58	10.85	0.50
3RD QUANTILE	98.42	15.03	0.75
VOL. WGT. MEAN	95.88	13.10	0.54

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : I

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
13	135.0	9	11	11	10	11	11
MAXIMUM	135.0	54.2	4.53	0.1380	0.1290	6.25	0.920
MINIMUM	22.0	20.9	3.86	0.0295	0.0472	1.15	0.260
RANGE	113.0	33.3	0.67	0.1085	0.0818	5.10	0.660
ARITH. MEAN	71.4	34.3	4.27	0.0616	0.0820	3.30	0.454
ARITH. STD. DEV.	36.8	12.2	0.23	0.0348	0.0288	1.44	0.182
GEOM. MEAN	62.2	32.4	4.26	0.0539	0.0778	2.99	0.427
GEOM. STD. DEV.	1.8	1.4	1.06	1.7028	1.4079	1.62	1.427
1ST QUARTILE	40.9	22.7	4.03	0.0302	0.0588	1.90	0.310
2ND QUARTILE	59.0	30.6	4.27	0.0432	0.0728	3.25	0.410
3RD QUARTILE	87.2	37.6	4.45	0.0829	0.0943	3.80	0.505
VOL. WGT. MEAN	*****	32.4	*****	0.0553	0.0763	3.09	0.417

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
10	0.410	11	11	10	10	10	11
MAXIMUM	0.410	1.080	1.090	0.085	0.060	0.825	0.960
MINIMUM	0.070	0.060	0.130	0.000	0.015	0.015	0.088
RANGE	0.340	1.020	0.960	0.085	0.045	0.810	0.872
ARITH. MEAN	0.186	0.330	0.489	0.030	0.029	0.221	0.422
ARITH. STD. DEV.	0.098	0.320	0.279	0.022	0.015	0.249	0.244
GEOM. MEAN	0.168	0.215	0.419	0.043	0.026	0.106	0.357
GEOM. STD. DEV.	1.651	2.699	1.828	1.800	1.606	4.260	1.897
1ST QUARTILE	0.120	0.070	0.260	0.017	0.017	0.017	0.249
2ND QUARTILE	0.170	0.190	0.395	0.030	0.022	0.163	0.333
3RD QUARTILE	0.210	0.430	0.630	0.032	0.035	0.297	0.575
VOL. WGT. MEAN	0.183	0.257	0.421	0.031	0.029	0.163	0.353

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.0280	17.00	82.00	13.82	2952.00	23.94	3.00
MINIMUM	0.0005	1.00	0.50	4.33	39.62	7.20	1.00
RANGE	0.0275	16.00	81.50	9.49	2912.18	16.74	2.00
ARITH. MEAN	0.0120	4.00	15.41	7.51	390.52	11.41	1.18
ARITH. STD. DEV.	0.0084	4.71	24.44	3.04	855.54	5.68	0.60
GEOM. MEAN	0.0082	2.71	4.96	7.05	137.73	10.40	1.11
GEOM. STD. DEV.	3.0818	2.30	5.77	1.44	3.56	1.54	1.39
1ST QUANTILE	0.0040	1.50	0.50	5.24	44.33	7.45	1.00
2ND QUANTILE	0.0105	2.00	7.00	6.19	114.00	8.22	1.00
3RD QUANTILE	0.0170	3.00	12.00	8.01	214.70	14.50	1.00
VOL. WGT. MEAN	0.0114	3.35	16.65	7.11	352.93	11.77	1.15

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	11
MAXIMUM	1130.00	54.94	1.20
MINIMUM	14.20	1.88	0.10
RANGE	1115.80	53.05	1.10
ARITH. MEAN	162.53	15.45	0.45
ARITH. STD. DEV.	323.18	18.12	0.34
GEOM. MEAN	71.68	8.60	0.34
GEOM. STD. DEV.	3.07	3.12	2.27
1ST QUANTILE	34.24	2.56	0.15
2ND QUANTILE	58.36	7.03	0.30
3RD QUANTILE	101.04	17.29	0.65
VOL. WGT. MEAN	147.88	19.36	0.47

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4.83 TO JAN 3.84

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
13	13	11	12	12	12	12	12
MAXIMUM	190.0	55.0	4.47	0.0955	0.1610	6.30	0.820
MINIMUM	27.0	19.8	4.02	0.0339	0.0593	1.60	0.240
RANGE	163.0	35.2	0.45	0.0616	0.1017	4.70	0.580
ARITH. MEAN	76.8	37.5	4.26	0.0572	0.0903	4.09	0.513
ARITH. STD. DEV.	42.3	12.0	0.14	0.0191	0.0280	1.39	0.197
GEOM. MEAN	67.6	33.7	4.26	0.0544	0.0869	3.83	0.478
GEOM. STD. DEV.	1.7	1.4	1.03	1.3885	1.3264	1.49	1.496
1ST QUARTILE	46.0	24.8	4.15	0.0422	0.0711	2.88	0.345
2ND QUARTILE	70.5	36.6	4.26	0.0544	0.0885	4.42	0.500
3RD QUARTILE	81.5	45.5	4.38	0.0708	0.0991	4.80	0.665
VOL. WGT. MEAN	*****	35.1	*****	0.0512	0.0638	4.02	0.472

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
12	12	11	12	12	12	12	13
MAXIMUM	0.050	0.440	1.230	0.185	0.145	0.160	1.290
MINIMUM	0.150	0.100	0.170	0.050	0.002	0.015	0.110
RANGE	0.700	0.340	1.060	0.135	0.142	0.145	1.180
ARITH. MEAN	0.453	0.225	0.605	0.100	0.053	0.075	0.528
ARITH. STD. DEV.	0.185	0.097	0.316	0.045	0.044	0.047	0.318
GEOM. MEAN	0.416	0.209	0.526	0.091	0.035	0.061	0.442
GEOM. STD. DEV.	1.576	1.508	1.780	1.524	3.021	2.023	1.915
1ST QUARTILE	0.320	0.155	0.360	0.067	0.022	0.045	0.308
2ND QUARTILE	0.465	0.195	0.520	0.085	0.032	0.055	0.430
3RD QUARTILE	0.520	0.260	0.850	0.123	0.085	0.103	0.680
VOL. WGT. MEAN	0.438	0.201	0.649	0.093	0.064	0.066	0.503

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	13	13	12	12	12	13
MAXIMUM	0.1170	13.00	0.50	14.11	233.70	22.32	2.00
MINIMUM	0.0040	2.00	0.50	4.48	22.12	3.19	1.00
RANGE	0.1130	11.00	0.00	9.63	211.58	19.13	1.00
ARITH. MEAN	0.0209	4.69	0.50	7.65	71.21	8.56	1.08
ARITH. STD. DEV.	0.0316	2.95	0.00	3.03	56.31	5.27	0.28
GEOM. MEAN	0.0119	4.06	0.50	7.18	59.05	7.42	1.05
GEOM. STD. DEV.	2.6646	1.72	1.00	1.43	1.80	1.72	1.21
1ST QUARTILE	0.0055	2.50	0.50	5.49	45.31	5.71	1.00
2ND QUARTILE	0.0110	4.00	0.50	6.75	52.48	7.51	1.00
3RD QUARTILE	0.0165	5.00	0.50	9.35	71.85	9.25	1.00
VOL. WGT. MEAN	0.0324	4.51	0.50	6.80	60.76	6.99	1.08

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	13
MAXIMUM	176.90	3.05	0.10
MINIMUM	29.84	0.74	0.05
RANGE	147.06	2.31	0.05
ARITH. MEAN	61.11	1.34	0.06
ARITH. STD. DEV.	40.02	0.81	0.02
GEOM. MEAN	53.66	1.17	0.06
GEOM. STD. DEV.	1.63	1.66	1.30
1ST QUARTILE	39.90	0.82	0.05
2ND QUARTILE	48.66	0.94	0.05
3RD QUARTILE	63.33	1.74	0.05
VOL. WGT. MEAN	55.05	1.36	0.06

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4.83 TO DEC 6.83

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
12	12	10	12	12	12	11	10
MAXIMUM	134.0	62.0	6.83	0.0955	0.1520	6.55	1.010
MINIMUM	30.8	14.1	4.02	0.0001	0.0226	2.40	0.340
RANGE	103.2	47.9	2.81	0.0954	0.1294	4.15	0.670
ARITH. MEAN	69.7	42.3	4.40	0.0637	0.0961	4.42	0.560
ARITH. STD. DEV	31.0	14.4	0.78	0.0280	0.0344	1.36	0.190
GEOM. MEAN	63.6	39.4	4.35	0.0400	0.0880	4.22	0.536
GEOM. STD. DEV.	1.6	1.5	1.16	5.9834	1.6434	1.39	1.355
1ST QUARTILE	41.0	31.6	4.05	0.0462	0.0784	2.95	0.440
2ND QUARTILE	60.0	43.3	4.16	0.0692	0.0988	4.35	0.495
3RD QUARTILE	84.0	49.3	4.34	0.0891	0.1165	5.13	0.595
VOL. WGT. MEAN	*****	42.1	*****	0.0622	0.0957	4.43	0.516

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
11	11	11	12	11	11	11	12
MAXIMUM	0.670	0.760	1.100	0.295	0.100	0.220	0.770
MINIMUM	0.250	0.110	0.290	0.065	0.005	0.020	0.244
RANGE	0.420	0.650	0.810	0.230	0.095	0.200	0.526
ARITH. MEAN	0.408	0.267	0.641	0.110	0.045	0.096	0.432
ARITH. STD. DEV	0.168	0.184	0.273	0.065	0.028	0.074	0.169
GEOM. MEAN	0.385	0.229	0.508	0.099	0.035	0.071	0.402
GEOM. STD. DEV.	1.395	1.723	1.547	1.538	2.293	2.360	1.489
1ST QUARTILE	0.295	0.150	0.385	0.070	0.023	0.030	0.270
2ND QUARTILE	0.355	0.185	0.615	0.092	0.037	0.057	0.460
3RD QUARTILE	0.440	0.290	0.830	0.113	0.055	0.150	0.540
VOL. WGT. MEAN	0.381	0.240	0.636	0.096	0.042	0.088	0.417

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE (1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	11	11	11	11	11	11
MAXIMUM	0.1200	6.00	1.00	12.89	93.68	16.89	1.00
MINIMUM	0.0070	0.50	0.50	4.44	23.43	3.22	1.00
RANGE	0.1130	5.50	0.50	8.45	70.25	13.67	0.00
ARITH. MEAN	0.0247	3.77	0.55	6.34	51.09	8.92	1.00
ARITH. STD. DEV.	0.0314	1.51	0.15	2.58	20.73	4.34	0.00
GEOM. MEAN	0.0167	3.27	0.53	5.98	47.33	8.05	1.00
GEOM. STD. DEV.	2.2355	1.99	1.23	1.39	1.52	1.61	1.00
1ST QUARTILE	0.0090	2.50	0.50	4.58	31.91	6.26	1.00
2ND QUARTILE	0.0160	4.00	0.50	5.20	45.13	7.13	1.00
3RD QUARTILE	0.0195	4.50	0.50	6.36	61.43	10.38	1.00
VOL. WGT. MEAN	0.0257	3.72	0.53	5.82	49.16	7.69	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	11	11	11
MAXIMUM	103.30	2.14	0.20
MINIMUM	24.68	0.76	0.05
RANGE	78.62	1.38	0.15
ARITH. MEAN	52.97	1.25	0.07
ARITH. STD. DEV.	23.51	0.50	0.05
GEOM. MEAN	48.63	1.17	0.06
GEOM. STD. DEV.	1.54	1.47	1.60
1ST QUARTILE	33.19	0.80	0.05
2ND QUARTILE	43.90	0.99	0.05
3RD QUARTILE	67.40	1.56	0.07
VOL. WGT. MEAN	52.77	1.26	0.07

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4.83 TO JAN 3.84

PAGE : 1

	PRECIP.		CONDUCT.		PH LAB	FREE H+		TOTAL H+		SULPHATE		NITRATE	
	MM		UMHO/CM			LAB	MG/L	GRAN	MG/L	MG/L		AS N	MG/L
# OF SAMPLES	13		12		9		9	10		12		12	
MAXIMUM	102.0		64.0		7.26		0.0537	0.1000		8.90		1.270	
MINIMUM	18.0		15.5		4.27		0.0001	0.0161		3.25		0.490	
RANGE	84.0		48.5		2.99		0.0536	0.0839		5.65		0.780	
ARITH. MEAN	56.8		37.5		5.27		0.0197	0.0503		5.98		0.776	
ARITH. STD. DEV.	24.4		13.7		1.08		0.0206	0.0296		1.94		0.270	
GEOM. MEAN	51.3		35.1		5.19		0.0053	0.0425		5.69		0.737	
GEOM. STD. DEV.	1.6		1.5		1.21		11.9099	1.8880		1.40		1.388	
1ST QUARTILE	37.0		27.1		4.44		0.0008	0.0205		4.45		0.560	
2ND QUARTILE	53.0		39.6		4.76		0.0126	0.0474		5.95		0.715	
3RD QUARTILE	68.5		44.4		5.43		0.0225	0.0550		7.50		0.985	
VOL. WGT. MEAN	*****		34.5		*****		0.0172	0.0512		5.73		0.727	

	CALCIUM		CHLORIDE		KJELDAHL		MAGNESIUM		POTASSIUM		SODIUM		AMMONIUM	
	MG/L		MG/L		AS N	MG/L	MG/L		MG/L		MG/L		AS N	MG/L
# OF SAMPLES	12		12		12		12		12		12		12	
MAXIMUM	4.000		7.300		1.450		0.790		0.130		4.550		0.930	
MINIMUM	0.900		0.230		0.290		0.010		0.040		0.050		0.216	
RANGE	3.100		7.070		1.160		0.780		0.090		4.500		0.714	
ARITH. MEAN	2.092		1.648		0.774		0.384		0.067		0.929		0.604	
ARITH. STD. DEV.	1.252		2.108		0.358		0.261		0.031		1.362		0.214	
GEOM. MEAN	1.769		0.881		0.692		0.263		0.061		0.328		0.559	
GEOM. STD. DEV.	1.831		3.077		1.677		3.261		1.541		4.734		1.560	
1ST QUARTILE	0.995		0.375		0.495		0.192		0.040		0.090		0.448	
2ND QUARTILE	1.530		0.580		0.765		0.282		0.055		0.248		0.685	
3RD QUARTILE	3.305		2.650		0.945		0.625		0.095		1.665		0.735	
VOL. WGT. MEAN	1.979		1.324		0.739		0.358		0.067		0.725		0.576	

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12	12	11	12	12
MAXIMUM	0.1190	22.00	3.00	308.30	522.60	113.40	3.00
MINIMUM	0.0100	5.00	0.50	12.68	66.30	22.46	1.00
RANGE	0.1090	17.00	2.50	295.62	456.30	90.94	2.00
ARITH. MEAN	0.0267	11.25	0.96	54.17	209.96	48.62	1.17
ARITH. STD. DEV	0.0298	6.02	0.78	81.52	169.25	28.70	0.58
GEOM. MEAN	0.0203	9.86	0.77	33.76	160.93	42.18	1.10
GEOM. STD. DEV.	1.9196	1.71	1.86	2.33	2.10	1.72	1.37
1ST QUARTILE	0.0135	6.00	0.50	19.75	84.47	24.78	1.00
2ND QUARTILE	0.0180	9.00	0.50	27.29	116.10	38.70	1.00
3RD QUARTILE	0.0245	16.00	1.00	45.36	292.45	67.61	1.00
VOL. MGT. MEAN	0.0277	10.55	0.89	60.65	185.57	44.39	1.07

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12
MAXIMUM	281.10	23.44	0.80
MINIMUM	53.14	1.18	0.10
RANGE	227.96	22.26	0.70
ARITH. MEAN	133.72	9.41	0.32
ARITH. STD. DEV	76.01	6.56	0.20
GEOM. MEAN	115.51	7.17	0.27
GEOM. STD. DEV.	1.76	2.33	1.88
1ST QUARTILE	68.00	4.49	0.20
2ND QUARTILE	109.06	8.56	0.25
3RD QUARTILE	193.25	11.92	0.40
VOL. MGT. MEAN	126.14	8.20	0.30

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
13	13	12	12	12	13	13	13
MAXIMUM	248.0	55.0	4.44	0.0933	0.1260	5.90	0.790
MINIMUM	32.0	20.3	4.03	0.0363	0.0321	1.90	0.240
RANGE	216.0	34.7	0.41	0.0570	0.0939	4.00	0.550
ARITH. MEAN	60.4	36.5	4.24	0.0598	0.0817	3.96	0.504
ARITH. STD. DEV.	55.3	10.9	0.13	0.0177	0.0245	1.02	0.179
GEOM. MEAN	69.2	35.0	4.24	0.0575	0.0777	3.82	0.472
GEOM. STD. DEV.	1.7	1.4	1.03	1.3366	1.4203	1.34	1.473
1ST QUARTILE	49.0	28.1	4.14	0.0462	0.0678	3.30	0.380
2ND QUARTILE	65.0	36.4	4.25	0.0562	0.0795	3.93	0.490
3RD QUARTILE	82.0	44.5	4.34	0.0717	0.0952	4.45	0.610
VOL. WGT. MEAN	*****	35.8	*****	0.0554	0.0823	3.87	0.466

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
13	13	13	13	13	13	13	13
MAXIMUM	1.140	0.440	0.740	0.245	0.470	0.155	0.670
MINIMUM	0.230	0.070	0.190	0.045	0.002	0.015	0.010
RANGE	0.910	0.370	0.550	0.200	0.468	0.140	0.660
ARITH. MEAN	0.442	0.231	0.518	0.092	0.074	0.075	0.399
ARITH. STD. DEV.	0.228	0.119	0.177	0.050	0.121	0.045	0.211
GEOM. MEAN	0.406	0.202	0.485	0.083	0.039	0.063	0.285
GEOM. STD. DEV.	1.490	1.741	1.499	1.525	3.173	1.956	3.236
1ST QUARTILE	0.320	0.130	0.370	0.062	0.022	0.037	0.275
2ND QUARTILE	0.390	0.185	0.515	0.080	0.040	0.057	0.386
3RD QUARTILE	0.465	0.305	0.650	0.092	0.055	0.092	0.530
VOL. WGT. MEAN	0.408	0.219	0.487	0.082	0.073	0.067	0.376

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	13	13	13	12	12	12	13
MAXIMUM :	0.0490	7.00	1.00	11.31	96.23	27.94	1.00
MINIMUM :	0.0090	3.00	0.50	5.39	37.22	3.90	1.00
RANGE :	0.0400	4.00	0.50	5.92	59.01	24.04	0.00
ARITH. MEAN :	0.0168	4.69	0.62	6.83	58.31	10.63	1.00
ARITH. STD. DEV. :	0.0113	1.25	0.22	2.02	18.69	6.35	0.00
GEOM. MEAN :	0.0147	4.54	0.59	6.61	55.88	9.27	1.00
GEOM. STD. DEV. :	1.6332	1.30	1.36	1.29	1.35	1.72	1.00
1ST QUARTILE :	0.0105	4.00	0.50	5.60	45.29	6.77	1.00
2ND QUARTILE :	0.0125	4.50	0.50	5.97	51.99	9.78	1.00
3RD QUARTILE :	0.0150	5.00	0.50	6.93	65.11	12.38	1.00
VOL. WGT. MEAN :	0.0161	4.40	0.69	6.60	58.31	9.92	1.00

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	13
MAXIMUM :	111.80	4.10	0.50
MINIMUM :	30.35	0.70	0.05
RANGE :	81.45	3.40	0.45
ARITH. MEAN :	57.74	1.84	0.12
ARITH. STD. DEV. :	22.78	1.16	0.13
GEOM. MEAN :	54.20	1.54	0.08
GEOM. STD. DEV. :	1.44	1.84	2.13
1ST QUARTILE :	44.22	0.90	0.05
2ND QUARTILE :	52.53	1.31	0.05
3RD QUARTILE :	65.91	2.70	0.10
VOL. WGT. MEAN :	58.37	2.04	0.18

PART IV

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HA-DIMAND-NORFOLK REGION(NHNP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
76	76	66	72	72	73	71	71
MAXIMUM	248.0	65.0	7.64	0.0955	0.1950	9.30	1.140
MINIMUM	11.0	14.1	4.02	0.0000	0.0146	1.60	0.240
RANGE	237.0	50.9	3.62	0.0955	0.1804	7.70	0.920
ARITH. MEAN	74.2	38.4	4.36	0.0559	0.0865	4.28	0.544
ARITH. STD. DEV.	42.3	12.2	0.53	0.0234	0.0346	1.43	0.206
GEOM. MEAN	64.3	36.3	4.34	0.0435	0.0787	4.04	0.529
GEOM. STD. DEV.	1.7	1.4	1.10	3.4118	1.6112	1.42	1.434
1ST QUARTILE	42.8	28.0	4.14	0.0417	0.0645	3.13	0.385
2ND QUARTILE	69.5	37.9	4.27	0.0543	0.0857	4.22	0.535
3RD QUARTILE	86.3	46.8	4.38	0.0716	0.1060	4.97	0.640
VOL. WGT. MEAN	*****	37.0	*****	0.0534	0.0865	4.23	0.514

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
71	71	71	74	71	70	71	74
MAXIMUM	2.200	1.760	3.250	0.720	0.685	0.575	1.430
MINIMUM	0.150	0.060	0.170	0.030	0.000	0.000	0.010
RANGE	2.050	1.700	3.080	0.690	0.685	0.575	1.420
ARITH. MEAN	0.494	0.284	0.722	0.121	0.066	0.096	0.512
ARITH. STD. DEV.	0.303	0.242	0.542	0.101	0.106	0.097	0.312
GEOM. MEAN	0.437	0.231	0.598	0.100	0.042	0.074	0.402
GEOM. STD. DEV.	1.596	1.830	1.808	1.787	2.559	2.150	2.354
1ST QUARTILE	0.325	0.155	0.415	0.070	0.025	0.040	0.292
2ND QUARTILE	0.430	0.210	0.615	0.090	0.040	0.067	0.460
3RD QUARTILE	0.520	0.320	0.810	0.123	0.060	0.110	0.650
VOL. WGT. MEAN	0.445	0.255	0.661	0.104	0.066	0.083	0.479

***** : INSUFFICIENT DATA OR NOT APPLI - BLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE EPIN

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIGHAND-NORFOLK REGION(NEMPI)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	73	73	73	68	68	68	73
MAXIMUM	0.1280	36.00	1.00	43.10	261.10	33.50	2.00
MINIMUM	0.0040	0.50	0.50	3.69	22.12	0.69	1.00
RANGE	0.1240	35.50	0.50	39.41	238.98	32.80	1.00
ARITH. MEAN	0.0214	5.92	0.54	8.88	71.59	10.16	1.01
ARITH. STD. DEV	0.0245	4.80	0.14	6.09	48.53	6.06	0.12
GEOM. MEAN	0.0153	4.88	0.53	7.76	61.18	8.55	1.01
GEOM. STD. DEV.	2.0803	1.83	1.21	1.60	1.71	1.88	1.08
1ST QUARTILE	0.0100	4.00	0.50	5.55	45.29	6.25	1.00
2ND QUARTILE	0.0140	5.00	0.50	6.77	56.50	8.38	1.00
3RD QUARTILE	0.0195	6.00	0.50	10.52	80.74	13.23	1.00
VOL. WGT. MEAN	0.0213	5.17	0.55	7.72	62.89	9.08	1.01

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	68	68	73
MAXIMUM	241.60	7.05	0.50
MINIMUM	22.93	0.69	0.05
RANGE	218.67	6.36	0.45
ARITH. MEAN	65.15	1.66	0.08
ARITH. STD. DEV	38.86	1.06	0.07
GEOM. MEAN	57.11	1.43	0.07
GEOM. STD. DEV.	1.64	1.70	1.70
1ST QUARTILE	41.49	0.87	0.05
2ND QUARTILE	54.90	1.37	0.05
3RD QUARTILE	76.24	2.20	0.10
VOL. WGT. MEAN	60.96	1.57	0.09

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAXIMUM	38	30	34	34	33	34	35
MINIMUM	135.0	122.0	7.66	0.2138	0.2730	14.20	1.230
RANGE	16.1	18.5	3.67	0.0000	0.0447	1.15	0.020
ARITH. MEAN	118.9	103.5	3.99	0.2138	0.2283	13.05	1.210
ARITH. STD. DEV.	60.7	45.7	0.64	0.0729	0.1076	4.22	0.557
GEOM. MEAN	34.7	23.1	0.64	0.0428	0.0490	2.41	0.297
GEOM. STD. DEV.	51.3	41.3	4.25	0.0520	0.0986	3.76	0.448
1ST QUARTILE	1.8	1.6	1.12	4.3310	1.5189	1.60	2.046
2ND QUARTILE	31.4	31.4	4.03	0.0422	0.0755	2.75	0.350
3RD QUARTILE	52.6	39.2	4.19	0.0638	0.0963	3.55	0.485
VOL. WGT. MEAN	77.9	50.5	4.36	0.0912	0.1280	4.80	0.745
	*****	41.6	*****	0.0619	0.0950	3.80	0.458

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
MAXIMUM	33	35	35	33	33	33	33
MINIMUM	0.630	1.310	11.500	0.145	2.910	1.150	1.450
RANGE	0.070	0.000	0.130	0.000	0.008	0.010	0.088
ARITH. MEAN	0.560	1.310	11.370	0.145	2.902	1.140	1.362
ARITH. STD. DEV.	0.211	0.370	0.883	0.040	0.133	0.271	0.439
GEOM. MEAN	0.119	0.371	1.891	0.034	0.500	0.321	0.271
GEOM. STD. DEV.	0.185	0.257	0.522	0.063	0.039	0.118	0.379
1ST QUARTILE	1.652	2.555	2.195	1.863	3.069	4.174	1.721
2ND QUARTILE	0.125	0.100	0.325	0.020	0.020	0.032	0.277
3RD QUARTILE	0.195	0.225	0.470	0.030	0.030	0.103	0.354
VOL. WGT. MEAN	0.240	0.435	0.680	0.040	0.060	0.337	0.510
	0.191	0.269	0.827	0.037	0.129	0.182	0.363

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	35	35	35	33	33	33	35
MAXIMUM	1.1900	37.00	82.00	128.30	2952.00	32.24	3.00
MINIMUM	0.0005	1.00	0.50	4.29	30.80	5.24	1.00
RANGE	1.1895	36.00	81.50	124.01	2921.20	27.00	2.00
ARITH. MEAN	0.0492	4.80	8.59	18.02	249.04	12.52	1.09
ARITH. STD. DEV.	0.1994	6.59	16.00	29.84	572.86	6.78	0.37
GEOM. MEAN	0.0104	3.12	2.88	9.98	104.68	11.07	1.05
GEOM. STD. DEV.	4.1100	2.31	4.53	2.47	2.89	1.63	1.24
1ST QUARTILE	0.0050	2.00	0.50	5.58	47.43	7.49	1.00
2ND QUARTILE	0.0095	3.00	3.00	6.98	88.23	8.84	1.00
3RD QUARTILE	0.0200	4.00	8.50	12.45	149.95	17.31	1.00
VOL. WGT. MEAN	0.0495	3.51	8.74	12.79	206.16	10.91	1.07

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	33	33	35
MAXIMUM	1130.00	68.85	2.80
MINIMUM	14.20	0.80	0.05
RANGE	1115.80	68.05	2.75
ARITH. MEAN	121.30	11.94	0.50
ARITH. STD. DEV.	221.74	15.73	0.64
GEOM. MEAN	66.03	6.46	0.29
GEOM. STD. DEV.	2.50	3.04	3.00
1ST QUARTILE	36.59	2.59	0.10
2ND QUARTILE	57.82	5.65	0.30
3RD QUARTILE	90.36	12.91	0.60
VOL. WGT. MEAN	101.29	12.41	0.58

PART V

SUMMARY STATISTICS OF WET DEPOSITION BY STATION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH0.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
MAXIMUM	13	11	11	11	11	10	11
MINIMUM	160.0	10.0953	18.2400	864.00	86.400	67.600	98.560
RANGE	11.0	0.1868	0.7194	108.07	20.116	22.470	13.650
ARITH. MEAN	149.0	9.9085	17.5206	755.93	66.284	45.130	84.910
ARITH. STD. DEV	66.8	3.6849	6.3380	355.96	44.454	49.523	30.622
GEOM. MEAN	38.8	2.7686	4.6657	220.14	18.455	14.917	26.483
GEOM. STD. DEV.	55.4	2.5871	4.7740	302.20	41.270	47.090	24.119
1ST QUARTILE	2.0	2.8838	2.3178	1.83	1.426	1.426	1.945
2ND QUARTILE	38.7	1.5853	2.9218	168.26	29.790	38.070	14.228
3RD QUARTILE	64.0	2.8002	4.9966	278.97	39.265	49.266	16.685
VOL. WGT. MEAN	75.6	5.0329	7.6442	411.77	55.060	57.285	33.806
	*****	3.4877	5.9042	318.44	39.769	43.225	27.395

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
MAXIMUM	12	10	10	10	11	12	11
MINIMUM	100.100	21.450	9.100	38.570	92.300	2.6320	0.8280
RANGE	13.804	6.634	0.749	1.890	3.248	0.4494	0.1926
ARITH. MEAN	86.296	14.816	8.351	36.600	89.052	2.1826	0.6354
ARITH. STD. DEV	43.737	13.452	4.162	11.104	36.664	1.2700	0.5819
GEOM. MEAN	24.056	4.193	2.625	11.510	26.060	0.6439	0.2204
GEOM. STD. DEV.	38.387	12.801	3.235	7.573	27.689	1.1370	0.5356
1ST QUARTILE	1.714	1.413	2.296	2.443	1.6363	1.6363	1.5823
2ND QUARTILE	30.048	9.940	1.329	4.255	18.459	0.8788	0.3730
3RD QUARTILE	38.940	13.760	4.777	6.262	25.875	1.1200	0.5470
VOL. WGT. MEAN	49.867	15.214	5.180	10.280	45.581	1.4329	0.8060
	42.120	11.741	3.633	9.692	32.800	1.2231	0.5508

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
API05 - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/H#2	MG/H#2	MG/H#2	MG/H#2	MG/H#2	MG/H#2	MG/H#2
# OF SAMPLES	11	10	10	10	11	10	10
MAXIMUM	0.0800	1.281	16.4493	1.2441	0.160	15.221	0.2640
MINIMUM	0.0107	0.432	2.0717	0.2772	0.011	1.225	0.0483
RANGE	0.0693	0.849	14.3776	0.9669	0.149	13.996	0.2158
ARITH. MEAN	0.0358	0.714	6.4505	0.7162	0.071	6.201	0.1118
ARITH. STD. DEV.	0.0198	0.244	4.6379	0.3313	0.041	4.546	0.0669
GEOM. MEAN	0.0306	0.682	5.2349	0.6423	0.058	4.790	0.0972
GEOM. STD. DEV.	1.8512	1.371	1.9565	1.6654	2.121	2.209	1.7222
1ST QUARTILE	0.0158	0.512	2.7350	0.3819	0.031	2.594	0.0578
2ND QUARTILE	0.0335	0.682	5.0233	0.7215	0.067	5.116	0.0861
3RD QUARTILE	0.0408	0.761	7.0605	0.9116	0.082	6.961	0.1370
VOL. WGT. MEAN	0.0339	0.675	6.0922	0.6764	0.067	5.856	0.1056

CADMIUM

	MG/H#2
# OF SAMPLES	11
MAXIMUM	0.00800
MINIMUM	0.00220
RANGE	0.00580
ARITH. MEAN	0.00445
ARITH. STD. DEV.	0.00165
GEOM. MEAN	0.00420
GEOM. STD. DEV.	1.42669
1ST QUARTILE	0.00330
2ND QUARTILE	0.00408
3RD QUARTILE	0.00493
VOL. WGT. MEAN	0.00421

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5, 83 TO DEC 6, 83

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
12	12	12	12	12	12	12	12
MAXIMUM	130.0	7.1440	11.9040	567.30	49.290	24.180	52.650
MINIMUM	24.0	1.1672	2.0884	91.95	9.800	3.123	2.520
RANGE	106.0	5.9768	9.8156	475.34	39.490	21.057	50.130
ARITH. MEAN	60.6	3.7671	5.7458	227.96	29.984	10.419	16.406
ARITH. STD. DEV.	36.6	1.9561	3.0894	146.03	12.957	6.370	14.016
GEOM. MEAN	51.7	3.2684	5.0046	191.93	26.848	8.557	12.433
GEOM. STD. DEV.	1.8	1.7986	1.7547	1.83	1.697	1.990	2.183
1ST QUARTILE	31.3	2.3149	3.5211	113.95	20.295	4.305	7.860
2ND QUARTILE	45.8	3.6196	5.1269	170.76	30.130	10.020	12.280
3RD QUARTILE	86.8	4.7775	7.1202	331.05	41.352	14.710	17.990
VOL. WGT. MEAN	*****	3.7761	5.7457	227.96	29.984	10.419	16.406

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
12	12	12	12	12	12	12	12
MAXIMUM	67.890	6.510	5.580	40.500	65.100	1.0515	0.2880
MINIMUM	8.664	0.000	0.260	0.900	6.931	0.0132	0.0405
RANGE	59.226	6.510	5.320	39.520	58.169	1.0382	0.2475
ARITH. MEAN	28.199	1.977	2.301	10.773	23.967	0.6116	0.1437
ARITH. STD. DEV.	18.810	1.785	1.690	12.420	16.499	0.5271	0.0965
GEOM. MEAN	23.098	1.583	1.616	6.039	19.652	0.3541	0.1144
GEOM. STD. DEV.	1.936	2.066	2.657	3.178	1.929	3.9412	2.0600
1ST QUARTILE	15.177	0.689	0.750	2.855	12.489	0.2152	0.0647
2ND QUARTILE	19.400	1.325	2.400	2.600	17.742	0.5370	0.1020
3RD QUARTILE	41.965	2.832	3.510	12.645	32.534	0.9330	0.2490
VOL. WGT. MEAN	28.199	1.977	2.301	10.773	23.967	0.6116	0.1437

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURMASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5, 83 TO DEC 6, 83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	12	11	11	11	12	11	11
MAXIMUM	0.3600	0.688	12.1380	0.8748	0.130	12.650	0.5652
MINIMUM	0.0140	0.195	1.2308	0.2271	0.024	1.057	0.0388
RANGE	0.3460	0.493	10.8992	0.6477	0.106	11.593	0.5264
ARITH. MEAN	0.0913	0.406	4.2017	0.5264	0.061	3.073	0.2157
ARITH. STD. DEV.	0.1269	0.178	3.1541	0.1902	0.037	3.289	0.1905
GEOM. MEAN	0.0474	0.371	3.3739	0.4926	0.052	2.326	0.1465
GEOM. STD. DEV.	2.9991	1.571	1.9879	1.4874	1.795	1.974	2.5850
1ST QUANTILE	0.0215	0.231	1.6425	0.3534	0.031	1.371	0.0549
2ND QUANTILE	0.0351	0.346	3.4059	0.5074	0.046	2.063	0.1442
3RD QUANTILE	0.0790	0.527	4.7215	0.6304	0.087	2.560	0.3412
VOL. WGT. MEAN	0.0913	0.397	4.1090	0.5148	0.061	3.005	0.2109

CADMIUM

	MG/M**2
# OF SAMPLES	12
MAXIMUM	0.02360
MINIMUM	0.00173
RANGE	0.02206
ARITH. MEAN	0.00929
ARITH. STD. DEV.	0.00752
GEOM. MEAN	0.00642
GEOM. STD. DEV.	2.58063
1ST QUANTILE	0.00255
2ND QUANTILE	0.00727
3RD QUANTILE	0.01515
VOL. WGT. MEAN	0.00929

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
13	13	13	13	12	13	13	13
MAXIMUM	161.0	8.8476	15.9712	893.55	91.770	75.050	49.898
MINIMUM	19.0	0.0004	0.4408	143.50	21.660	10.250	8.360
RANGE	142.0	8.8472	15.5304	750.05	70.110	64.800	41.538
ARITH. MEAN	77.9	3.1329	5.6526	374.53	43.800	36.230	20.360
ARITH. STD. DEV.	38.6	2.1684	3.6260	222.33	18.883	19.665	13.734
GEOM. MEAN	67.8	1.4549	4.5241	322.52	40.778	31.268	17.163
GEOM. STD. DEV.	1.8	12.4267	2.2668	1.77	1.463	1.797	1.795
1ST QUARTILE	45.5	2.1164	3.5624	219.92	32.103	20.450	10.640
2ND QUARTILE	75.9	2.6443	4.9450	328.50	38.389	31.619	16.075
3RD QUARTILE	93.5	3.5045	6.4910	476.41	42.660	42.060	20.725
VOL. WGT. MEAN	*****	3.1329	5.6526	352.32	43.800	36.230	20.360

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
13	13	13	12	13	13	12	13
MAXIMUM	222.370	23.275	65.075	24.131	135.240	7.0300	0.7600
MINIMUM	29.520	3.280	0.000	0.000	2.164	0.4656	0.1230
RANGE	192.850	19.995	65.075	24.131	133.076	6.5644	0.6370
ARITH. MEAN	86.277	9.880	8.612	6.276	56.598	1.7908	0.3482
ARITH. STD. DEV.	58.349	6.037	17.949	6.125	36.917	1.8235	0.1846
GEOM. MEAN	72.772	8.375	3.632	4.581	42.168	1.2737	0.3067
GEOM. STD. DEV.	1.788	1.017	3.019	2.051	2.758	2.2802	1.7010
1ST QUARTILE	51.397	5.141	1.824	2.327	31.627	0.6000	0.2120
2ND QUARTILE	60.250	7.550	3.181	4.743	48.978	1.1827	0.3011
3RD QUARTILE	83.460	11.948	6.210	6.437	56.250	2.3430	0.3085
VOL. WGT. MEAN	86.277	9.880	9.020	6.276	56.598	1.8756	0.3482

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/H#*2	MG/H#*2	MG/H#*2	MG/H#*2	MG/H#*2	MG/H#*2	MG/H#*2
# OF SAMPLES	13	12	12	12	13	12	12
MAXIMUM	0.0818	2.828	10.3068	3.3299	0.161	10.372	0.1818
MINIMUM	0.0095	0.397	1.5097	0.0639	0.019	1.197	0.0550
RANGE	0.0723	2.431	8.7971	3.2660	0.142	9.176	0.1267
ARITH. MEAN	0.0421	0.802	4.8859	0.7891	0.078	4.665	0.1028
ARITH. STD. DEV.	0.0227	0.691	2.5432	0.672	0.039	2.593	0.0409
GEOM. MEAN	0.0358	0.653	4.2865	0.5084	0.068	3.965	0.0959
GEOM. STD. DEV.	1.8959	1.819	1.7338	2.7801	1.808	1.877	1.4682
1ST QUANTILE	0.0227	0.410	2.9042	0.3396	0.045	2.530	0.0700
2ND QUANTILE	0.0392	0.531	4.2541	0.5386	0.076	5.056	0.0907
3RD QUANTILE	0.0486	0.884	6.7210	0.9494	0.093	6.247	0.1279
VOL. WGT. MEAN	0.0421	0.810	4.9338	0.7969	0.078	4.711	0.1038

	CADMIUM
	MG/H#*2
# OF SAMPLES	13
MAXIMUM	0.01202
MINIMUM	0.00190
RANGE	0.01012
ARITH. MEAN	0.00550
ARITH. STD. DEV.	0.00285
GEOM. MEAN	0.00492
GEOM. STD. DEV.	1.62310
1ST QUANTILE	0.00379
2ND QUANTILE	0.00447
3RD QUANTILE	0.00541
VOL. WGT. MEAN	0.00550

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6, 83

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/H#M#2	TOTAL H+ TO PH6.3 MG/H#M#2	SULPHATE MG/H#M#2	NITRATE AS N MG/H#M#2	CALCIUM MG/H#M#2	CHLORIDE MG/H#M#2
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	214.0	15.5029	25.3804	1080.70	109.140	62.060	56.268
MINIMUM	30.0	1.8077	3.2520	123.75	17.700	12.000	3.540
RANGE	184.0	13.6953	22.1284	956.95	91.440	50.060	52.728
ARITH. MEAN	73.5	4.5032	8.2962	285.17	35.292	25.840	15.721
ARITH. STD. DEV.	50.4	3.6629	7.0722	260.96	24.525	15.686	15.543
GEOM. MEAN	62.8	3.7648	6.6257	232.35	30.945	22.463	11.045
GEOM. STD. DEV.	1.7	1.7492	1.8824	1.78	1.610	1.698	2.347
1ST QUARTILE	42.3	2.7514	4.6151	172.52	25.800	15.480	4.850
2ND QUARTILE	56.0	3.5030	5.2798	211.47	27.730	20.050	11.700
3RD QUARTILE	89.5	4.7132	7.8365	256.75	34.010	34.086	15.610
VOL. WGT. MEAN	*****	4.5032	8.2962	285.17	35.292	25.840	15.721

	KJELDAHL AS N MG/H#M#2	MAGNESIUM MG/H#M#2	POTASSIUM MG/H#M#2	SODIUM MG/H#M#2	AMMONIUM AS N MG/H#M#2	PHOSPHOR MG/H#M#2	MANGANESE MG/H#M#2
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	100.580	9.630	10.700	11.770	89.880	1.9260	1.2840
MINIMUM	14.484	1.770	0.521	1.350	9.457	0.3040	0.1180
RANGE	86.096	7.860	10.179	10.420	80.423	1.6220	1.1660
ARITH. MEAN	30.999	4.392	2.857	4.821	24.839	0.4534	0.3818
ARITH. STD. DEV.	24.099	2.465	2.755	3.189	21.993	0.5146	0.3505
GEOM. MEAN	25.959	3.878	2.059	3.874	19.928	0.7108	2.0520
GEOM. STD. DEV.	1.758	1.661	2.297	2.052	1.874	1.7875	0.4500
1ST QUARTILE	17.340	2.957	1.000	1.950	12.389	0.4500	0.2450
2ND QUARTILE	22.648	3.490	2.143	4.627	18.685	0.6255	0.3054
3RD QUARTILE	35.145	5.584	3.345	6.170	25.885	1.1510	0.4600
VOL. WGT. MEAN	30.999	4.392	2.857	4.821	24.839	0.8340	0.4534

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4, 83 TO DEC 6, 83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	12	11	11	11	12	11	11
MAXIMUM	0.1070	1.540	11.2733	2.9489	0.214	8.067	0.4697
MINIMUM	0.0150	0.184	1.4892	0.2565	0.030	0.782	0.0466
RANGE	0.0920	1.356	9.7841	2.6924	0.184	7.285	0.4231
ARITH. MEAN	0.0367	0.496	4.2796	0.6994	0.073	4.085	0.1299
ARITH. STD. DEV.	0.0252	0.369	2.8003	0.7765	0.050	2.802	0.1180
GEOM. MEAN	0.0314	0.419	3.6301	0.5219	0.063	3.127	0.1034
GEOM. STD. DEV.	1.7314	1.766	1.8067	1.9836	1.731	2.259	1.9089
1ST QUANTILE	0.0211	0.247	2.1916	0.3204	0.042	1.367	0.0562
2ND QUANTILE	0.0280	0.389	3.3214	0.4496	0.056	2.703	0.0995
3RD QUANTILE	0.0447	0.527	5.1104	0.5274	0.089	6.379	0.1357
VOL. WGT. MEAN	0.0367	0.497	4.2876	0.7007	0.073	4.092	0.1301

	CADMIUM
	MG/MM#2
# OF SAMPLES	12
MAXIMUM	0.04280
MINIMUM	0.00150
RANGE	0.04130
ARITH. MEAN	0.00749
ARITH. STD. DEV.	0.01176
GEOM. MEAN	0.00419
GEOM. STD. DEV.	2.59125
1ST QUANTILE	0.00219
2ND QUANTILE	0.00335
3RD QUANTILE	0.00510
VOL. WGT. MEAN	0.00749

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
13	11	11	11	12	12	11	12
MAXIMUM	119.5	1.5415	2.3150	1097.40	116.328	364.975	123.402
MINIMUM	20.8	0.0008	0.8747	141.65	25.844	62.500	20.520
RANGE	98.7	1.5407	1.4403	955.75	90.484	322.475	102.882
ARITH. MEAN	59.5	0.1819	1.4909	558.73	61.679	223.344	44.191
ARITH. STD. DEV.	29.8	0.4667	0.4934	276.10	28.072	102.969	27.464
GEOM. MEAN	52.7	0.0109	1.4182	486.17	56.202	195.524	39.078
GEOM. STD. DEV.	1.7	10.1092	1.3932	1.81	1.573	1.809	1.619
1ST QUARTILE	36.6	0.0023	1.0851	395.14	37.605	104.170	26.667
2ND QUARTILE	53.1	0.0061	1.1523	532.27	57.235	214.447	37.675
3RD QUARTILE	66.3	0.0108	1.8693	744.25	71.780	297.847	50.120
VOL. WGT. MEAN	*****	0.1669	1.3679	530.01	58.509	204.917	41.920

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
12	11	11	11	11	11	12	9
MAXIMUM	190.950	88.500	9.735	28.577	100.005	4.7310	1.2600
MINIMUM	27.993	11.125	1.375	0.000	11.431	0.1770	0.2500
RANGE	162.957	77.375	8.360	28.577	88.574	4.5540	1.0100
ARITH. MEAN	68.003	48.425	4.815	12.083	45.207	1.2395	0.6529
ARITH. STD. DEV.	45.621	22.580	2.532	7.797	25.938	1.1955	0.3100
GEOM. MEAN	58.023	42.265	4.167	9.471	36.763	0.8998	0.5895
GEOM. STD. DEV.	1.760	1.834	1.816	1.681	1.823	2.3142	1.6307
1ST QUARTILE	38.162	25.305	2.363	6.525	27.064	0.6189	0.4013
2ND QUARTILE	53.988	47.736	4.253	9.425	32.368	0.9580	0.6095
3RD QUARTILE	81.525	60.825	6.237	16.737	60.822	1.3778	0.6855
VOL. WGT. MEAN	64.584	44.430	4.418	11.086	41.171	1.1758	0.5618

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

# OF SAMPLES	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
MAXIMUM	9	8	8	8	9	8	8
MINIMUM	0.2100	3.142	43.7220	4.0435	0.597	32.529	3.0019
RANGE	0.0225	0.986	4.7200	1.0610	0.065	3.052	0.4110
ARITH. MEAN	0.1875	2.156	39.0020	2.9825	0.532	29.476	2.5909
ARITH. STD. DEV.	0.0952	1.776	16.3783	2.0922	0.292	14.364	0.9435
GEOM. MEAN	0.0608	0.757	12.3246	1.0254	0.180	9.843	0.8671
GEOM. STD. DEV.	0.0768	1.649	13.3173	1.8956	0.243	11.584	0.7454
1ST QUANTILE	2.0959	1.502	1.9619	1.5989	1.981	2.085	1.9282
2ND QUANTILE	0.0390	1.221	9.0350	1.2869	0.176	8.594	0.4711
3RD QUANTILE	0.0825	1.472	12.8499	1.7686	0.195	10.600	0.6307
VOL. WGT. MEAN	0.1162	2.348	19.4074	2.7611	0.343	20.553	0.9658
	0.0820	1.524	14.0538	1.7953	0.252	12.343	0.8096

CADMIUM

# OF SAMPLES	HG/M**2
MAXIMUM	9
MINIMUM	0.03150
RANGE	0.00326
ARITH. MEAN	0.02824
ARITH. STD. DEV.	0.01224
GEOM. MEAN	0.00858
GEOM. STD. DEV.	0.00991
1ST QUANTILE	2.02081
2ND QUANTILE	0.00524
3RD QUANTILE	0.01062
VOL. WGT. MEAN	0.01300
	0.01053

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HAMMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH0.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
13	11	11	11	11	12	11	12
MAXIMUM	113.0	7.4490	14.4720	474.70	37.310	22.560	61.640
MINIMUM	16.1	0.0015	2.2898	60.90	1.340	3.864	0.000
RANGE	96.9	7.4475	12.1822	413.80	35.970	18.696	61.640
ARITH. MEAN	50.1	3.7127	6.6377	254.14	23.233	11.856	13.991
ARITH. STD. DEV.	29.8	2.3278	3.7839	147.64	10.934	6.519	16.466
GEOM. MEAN	42.0	1.7636	5.6680	200.47	18.732	10.007	8.098
GEOM. STD. DEV.	1.9	11.1428	1.8308	2.03	2.455	1.906	2.178
1ST QUARTILE	22.0	1.7206	3.0002	100.24	16.637	4.881	5.232
2ND QUARTILE	42.7	2.8621	5.4621	212.73	22.152	10.631	8.665
3RD QUARTILE	63.4	5.3293	8.7135	358.80	34.340	16.685	14.866
VOL. WGT. MEAN	*****	3.5802	6.4009	245.07	23.614	11.433	14.221

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
12	11	11	11	11	10	12	12
MAXIMUM	770.500	9.715	194.970	56.615	45.120	79.7300	0.7400
MINIMUM	7.830	0.644	0.600	1.410	5.484	0.1130	0.0696
RANGE	762.670	9.071	194.370	55.205	39.656	79.6170	0.6704
ARITH. MEAN	90.608	2.663	20.018	11.160	20.900	7.4333	0.2531
ARITH. STD. DEV.	215.204	2.676	58.046	16.034	13.924	22.7838	0.1873
GEOM. MEAN	30.378	1.897	3.099	5.786	16.057	0.7991	0.2031
GEOM. STD. DEV.	3.413	2.253	4.633	3.150	2.034	5.9038	2.0069
1ST QUARTILE	12.000	0.928	0.964	1.985	9.311	0.2118	0.1483
2ND QUARTILE	27.420	1.590	2.492	3.600	18.165	0.6425	0.2160
3RD QUARTILE	39.810	2.900	3.405	12.454	26.220	1.5260	0.2705
VOL. WGT. MEAN	92.096	2.568	19.304	10.762	20.756	7.5553	0.2573

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	12	11	11	11	12	11	11
MAXIMUM	1.0170	8.161	35.6800	1.3390	0.113	14.626	2.1300
MINIMUM	0.0495	0.186	1.3892	0.2728	0.016	1.127	0.1593
RANGE	0.9675	7.975	34.2908	1.0662	0.097	13.499	1.9707
ARITH. MEAN	0.3282	1.454	7.9821	0.6351	0.051	4.820	0.6588
ARITH. STD. DEV	0.3154	2.290	9.6218	0.3181	0.030	3.869	0.6132
GEOM. MEAN	0.2250	0.817	5.2992	0.5691	0.043	3.708	0.4589
GEOM. STD. DEV.	2.4849	2.644	2.4369	1.6366	1.849	2.151	2.4389
1ST QUARTILE	0.1253	0.535	2.5316	0.3384	0.030	1.565	0.1749
2ND QUARTILE	0.2232	0.603	4.8817	0.5385	0.043	3.725	0.4119
3RD QUARTILE	0.3715	0.967	7.6482	0.7842	0.069	5.762	0.7608
VOL. WGT. MEAN	0.3336	1.449	7.9535	0.6328	0.052	4.803	0.6564

CADMIUM

	MG/MM#2
# OF SAMPLES	12
MAXIMUM	0.04872
MINIMUM	0.00670
RANGE	0.04202
ARITH. MEAN	0.02657
ARITH. STD. DEV	0.01388
GEOM. MEAN	0.02306
GEOM. STD. DEV.	1.79346
1ST QUARTILE	0.01630
2ND QUARTILE	0.02327
3RD QUARTILE	0.04054
VOL. WGT. MEAN	0.02700

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVERY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/H**2	TOTAL H+ TO PH8.3 MG/H**2	SULPHATE MG/H**2	NITRATE AS N MG/H**2	CALCIUM MG/H**2	CHLORIDE MG/H**2
13	135.0	11	10	11	11	10	11
MAXIMUM	135.0	7.8124	10.8658	450.00	72.900	26.730	60.750
MINIMUM	22.0	1.0414	2.3388	38.75	10.120	2.359	3.899
RANGE	113.0	6.7710	8.5270	411.24	62.780	24.371	56.851
ARITH. MEAN	71.4	4.2605	6.2198	230.79	31.142	14.603	19.186
ARITH. STD. DEV	36.8	2.1606	2.7088	127.13	16.809	7.666	16.691
GEOM. MEAN	62.2	3.7135	5.6758	191.80	27.359	11.980	13.785
GEOM. STD. DEV.	1.8	1.7952	1.5907	2.04	1.732	2.154	2.384
1ST QUANTILE	40.9	2.6376	4.2844	100.99	17.037	7.885	5.610
2ND QUANTILE	59.0	3.2568	5.2480	226.75	28.506	15.100	12.565
3RD QUANTILE	87.2	6.2732	7.9076	262.07	34.219	16.640	23.663
VOL. WGT. MEAN	*****	3.9451	5.5513	220.52	29.756	13.033	18.332

# OF SAMPLES	KJELDAHL AS N MG/H**2	MAGNESIUM MG/H**2	POTASSIUM MG/H**2	SODIUM MG/H**2	AMMONIUM AS N MG/H**2	PHOSPHOR MG/H**2	MANGANESE MG/H**2
11	10	10	10	10	11	11	11
MAXIMUM	62.920	5.100	4.455	43.875	46.748	1.7550	1.0200
MINIMUM	10.447	0.000	0.437	1.080	9.301	0.0595	0.0337
RANGE	52.473	5.100	4.018	42.795	37.447	1.6955	0.9863
ARITH. MEAN	31.444	2.485	2.303	13.052	26.378	0.8535	0.2503
ARITH. STD. DEV	18.357	1.602	1.268	13.195	14.205	0.6668	0.2681
GEOM. MEAN	26.879	2.134	1.861	7.586	22.905	0.5274	0.1740
GEOM. STD. DEV.	1.808	1.911	2.196	3.335	1.766	3.3415	2.4314
1ST QUANTILE	15.933	1.045	0.973	2.097	13.627	0.1256	0.0848
2ND QUANTILE	23.990	2.332	2.321	9.362	19.920	0.6630	0.1960
3RD QUANTILE	45.225	3.300	2.862	16.334	39.908	1.5177	0.2400
VOL. WGT. MEAN	30.045	2.218	2.056	11.649	25.204	0.8155	0.2392

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (S.E. PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	4.9950	1.071	177.1200	3.2319	0.180	67.800	7.4169
MINIMUM	0.0110	0.122	0.8760	0.1820	0.022	0.832	0.0610
RANGE	4.9840	0.949	176.2439	3.0499	0.158	66.968	7.3559
ARITH. MEAN	1.2442	0.531	26.3701	0.8791	0.086	11.049	1.4468
ARITH. STD. DEV.	1.8751	0.291	51.7684	0.8278	0.050	19.444	2.1806
GEOM. MEAN	0.3183	0.452	8.8315	0.6667	0.071	4.596	0.5514
GEOM. STD. DEV.	7.5546	1.895	4.2267	2.1216	1.989	3.685	4.6905
1ST QUANTILE	0.0436	0.279	3.7308	0.3869	0.031	1.415	0.1151
2ND QUANTILE	0.4258	0.461	5.2626	0.6093	0.074	3.800	0.5156
3RD QUANTILE	0.9590	0.672	16.7369	0.9216	0.120	9.815	1.7079
VOL. WGT. MEAN	1.1888	0.507	25.1964	0.8399	0.082	10.558	1.3824

CADMIUM

	MG/M**2
# OF SAMPLES	11
MAXIMUM	0.16200
MINIMUM	0.00337
RANGE	0.15863
ARITH. MEAN	0.03487
ARITH. STD. DEV.	0.04407
GEOM. MEAN	0.02160
GEOM. STD. DEV.	2.72192
1ST QUANTILE	0.01045
2ND QUANTILE	0.01772
3RD QUANTILE	0.03600
VOL. WGT. MEAN	0.03332

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
13	13	12	12	12	12	12	11
MAXIMUM	190.0	6.7415	14.2500	921.50	100.700	106.400	28.500
MINIMUM	27.0	2.1946	2.9160	128.25	20.700	12.900	6.880
RANGE	163.0	4.5468	11.3340	793.25	80.000	93.500	21.620
ARITH. MEAN	76.8	4.1245	6.8829	323.60	37.996	35.329	16.290
ARITH. STD. DEV	42.3	1.5560	2.8895	217.22	21.393	24.760	6.808
GEOM. MEAN	67.6	3.9250	6.3919	276.35	34.460	30.002	14.954
GEOM. STD. DEV.	1.7	1.3917	1.4935	1.75	1.528	1.765	1.564
1ST QUANTILE	46.0	2.9938	5.1127	190.72	26.650	19.290	9.740
2ND QUANTILE	70.5	3.9048	6.6068	263.45	33.125	34.125	15.890
3RD QUANTILE	81.5	5.0299	7.9324	401.35	40.960	38.980	17.990
VOL. WGT. MEAN	*****	3.9293	6.5571	308.28	36.197	33.657	15.456

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
12	12	12	12	12	13	12	13
MAXIMUM	233.700	19.000	27.550	10.815	146.300	22.2300	1.3300
MINIMUM	14.620	3.185	0.215	1.155	9.460	0.1080	0.1080
RANGE	219.080	15.815	27.335	9.660	136.840	22.1220	1.2220
ARITH. MEAN	52.284	7.485	5.147	5.322	38.604	6.2065	0.3462
ARITH. STD. DEV	59.393	4.397	7.518	3.147	35.244	2.6090	0.3156
GEOM. MEAN	37.947	6.597	2.522	4.383	29.876	0.8586	0.2741
GEOM. STD. DEV.	2.097	1.654	3.589	2.009	2.021	3.6041	1.9182
1ST QUANTILE	22.805	4.647	1.267	2.692	18.546	0.4935	0.1595
2ND QUANTILE	37.365	5.575	2.457	4.862	27.668	0.6880	0.2570
3RD QUANTILE	51.045	9.195	5.905	6.997	39.198	1.1565	0.3535
VOL. WGT. MEAN	49.809	7.131	4.903	5.070	38.604	2.4855	0.3462

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINIUM	COPPER
	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2
# OF SAMPLES	13	12	12	12	13	12	12
MAXIMUM	0.0950	1.368	10.3246	1.1793	0.190	9.523	0.4948
MINIMUM	0.0135	0.316	1.4118	0.2993	0.027	0.926	0.0438
RANGE	0.0815	1.052	8.9128	0.8800	0.163	8.597	0.4510
ARITH. MEAN	0.0384	0.526	4.7039	0.5413	0.083	4.262	0.1054
ARITH. STD. DEV	0.0212	0.280	2.8342	0.2456	0.047	2.399	0.1244
GEOM. MEAN	0.0338	0.484	3.9838	0.5008	0.071	3.620	0.0792
GEOM. STD. DEV.	1.6956	1.467	1.8402	1.4867	1.775	1.885	1.9122
1ST QUARTILE	0.0230	0.397	2.8028	0.3676	0.046	2.400	0.0554
2ND QUARTILE	0.0352	0.430	3.6523	0.4651	0.070	3.895	0.0620
3RD QUARTILE	0.0407	0.568	6.7237	0.6534	0.094	5.541	0.0957
VOL. WGT. MEAN	0.0384	0.522	4.6645	0.5368	0.083	4.226	0.1045

CADMIUM

	MG/H**2
# OF SAMPLES	13
MAXIMUM	0.00950
MINIMUM	0.00155
RANGE	0.00795
ARITH. MEAN	0.00427
ARITH. STD. DEV	0.00240
GEOM. MEAN	0.00376
GEOM. STD. DEV.	1.67881
1ST QUARTILE	0.00257
2ND QUARTILE	0.00353
3RD QUARTILE	0.00450
VOL. WGT. MEAN	0.00427

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6, 83

PAGE : 1

# OF SAMPLES	PRECIP.		FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM	CHLORIDE
	MM	MM	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2
MAXIMUM	12	12	12.7969	20.4216	844.20	54.650	48.240	34.976
MINIMUM	134.0	134.0	0.0120	2.1546	133.25	17.550	11.700	5.850
RANGE	30.8	30.8	12.7849	18.2670	710.95	37.100	36.540	29.126
ARITH. MEAN	103.2	103.2	4.3393	6.8002	303.75	32.025	26.156	16.483
ARITH. STD. DEV.	69.7	69.7	3.1899	4.7409	200.51	9.538	11.117	8.940
GEOM. MEAN	31.0	31.0	2.5433	5.7826	262.67	30.854	23.971	14.244
GEOM. STD. DEV.	63.6	63.6	5.7833	1.7662	1.71	1.332	1.568	1.799
1ST QUARTILE	1.6	1.6	2.8238	4.0108	158.23	26.480	14.555	6.980
2ND QUARTILE	41.0	41.0	3.4222	5.7567	248.65	31.479	25.160	15.245
3RD QUARTILE	68.0	68.0	5.5422	8.1195	343.62	32.816	31.887	22.234
VOL. WGT. MEAN	84.0	84.0	4.3393	6.8002	308.70	35.975	26.582	16.751
	*****	*****						

# OF SAMPLES	KJELDAHL		MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	PHOSPHOR	MANGANESE
	AS N	AS N	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2	MG/HMM2
MAXIMUM	12	12	9.720	8.100	15.302	67.000	9.8400	0.5360
MINIMUM	90.200	90.200	2.870	0.546	1.300	10.906	0.4312	0.0205
RANGE	15.170	15.170	6.850	7.554	14.002	56.094	9.4088	0.5155
ARITH. MEAN	75.030	75.030	6.586	2.912	6.041	29.080	1.7903	0.2551
ARITH. STD. DEV.	44.374	44.374	2.321	2.209	4.721	15.854	2.6633	0.1410
GEOM. MEAN	26.499	26.499	6.173	2.178	4.401	25.592	1.0624	0.2035
GEOM. STD. DEV.	37.450	37.450	1.481	2.343	2.401	1.696	2.4755	2.3754
1ST QUARTILE	1.853	1.853	4.225	0.846	1.667	16.605	0.6085	0.1509
2ND QUARTILE	20.918	20.918	6.166	2.395	5.175	25.525	0.8545	0.2225
3RD QUARTILE	41.403	41.403	8.628	3.752	7.667	36.520	1.4527	0.3040
VOL. WGT. MEAN	64.420	64.420	6.693	2.960	6.139	29.080	1.7903	0.2593
	44.374	44.374						

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 4, 83 TO DEC 6, 83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.0670	0.720	6.2926	0.8788	0.134	6.156	0.2866
MINIMUM	0.0154	0.199	1.0557	0.2768	0.031	0.963	0.0378
RANGE	0.0516	0.521	5.2369	0.6019	0.103	5.193	0.2488
ARITH. MEAN	0.0361	0.399	3.3731	0.5277	0.069	3.620	0.0865
ARITH. STD. DEV.	0.0154	0.167	1.7813	0.1751	0.032	2.032	0.0700
GEOM. MEAN	0.0331	0.372	2.9437	0.5008	0.062	3.024	0.0728
GEOM. STD. DEV.	1.5568	1.469	1.7567	1.4125	1.593	1.947	1.7177
1ST QUARTILE	0.0205	0.271	1.8113	0.3373	0.040	1.584	0.0553
2ND QUARTILE	0.0340	0.366	2.5854	0.5151	0.061	2.933	0.0602
3RD QUARTILE	0.0417	0.391	4.5360	0.6227	0.083	5.587	0.0755
VOL. WGT. MEAN	0.0367	0.406	3.4279	0.5363	0.070	3.679	0.0879

CADMIUM

MG/MM#2

# OF SAMPLES	11
MAXIMUM	0.01420
MINIMUM	0.00195
RANGE	0.01225
ARITH. MEAN	0.00472
ARITH. STD. DEV.	0.00344
GEOM. MEAN	0.00400
GEOM. STD. DEV.	1.75579
1ST QUARTILE	0.00244
2ND QUARTILE	0.00365
3RD QUARTILE	0.00488
VOL. WGT. MEAN	0.00480

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
13		9	10	12	12	12	12
MAXIMUM	102.0	2.9746	10.8936	623.00	80.500	273.000	202.340
MINIMUM	18.0	0.0026	0.8928	161.00	23.100	29.700	12.870
RANGE	84.0	2.9720	10.0008	462.00	57.400	243.300	189.470
ARITH. MEAN	56.8	1.0093	3.2798	343.73	43.611	118.744	79.474
ARITH. STD. DEV.	24.4	1.0092	2.8863	145.60	15.696	72.347	76.555
GEOM. MEAN	51.3	0.2887	2.5559	318.14	41.240	98.986	49.300
GEOM. STD. DEV.	1.6	11.3349	2.0300	1.50	1.416	1.922	2.830
1ST QUARTILE	37.0	0.0605	1.4428	246.67	32.190	62.630	22.240
2ND QUARTILE	53.0	0.7139	2.6514	324.08	43.724	105.300	37.452
3RD QUARTILE	68.5	1.3928	3.3759	385.37	47.825	176.760	163.977
VOL. WGT. MEAN	*****	0.9755	3.0421	325.22	41.262	112.350	75.194

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
12		12	12	12	12	12	12
MAXIMUM	97.150	55.300	8.710	134.000	73.440	7.9730	1.4000
MINIMUM	16.560	0.818	1.640	1.815	14.076	0.3960	0.2300
RANGE	80.590	54.482	7.070	132.185	59.364	7.5770	1.1700
ARITH. MEAN	44.334	21.507	4.011	43.502	34.591	1.6613	0.6330
ARITH. STD. DEV.	25.392	15.887	2.341	51.230	16.626	2.0580	0.3542
GEOM. MEAN	38.726	14.739	3.431	18.349	31.280	1.1377	0.5514
GEOM. STD. DEV.	1.704	3.052	1.797	4.448	1.598	2.2515	1.7325
1ST QUARTILE	26.676	9.245	2.080	7.120	23.570	0.6085	0.4005
2ND QUARTILE	35.100	17.648	3.236	14.147	31.121	1.1645	0.5119
3RD QUARTILE	56.670	35.085	5.580	95.397	45.225	1.4880	0.9105
VOL. WGT. MEAN	41.946	20.349	3.795	41.159	32.729	1.5718	0.5989

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINIUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	12	12	11	12	12	12	12
MAXIMUM	0.1400	25.219	28.2870	4.9455	0.102	16.367	0.9077
MINIMUM	0.0205	0.695	3.9072	1.0893	0.033	2.968	0.0757
RANGE	0.1195	24.524	24.3798	3.8562	0.069	13.419	0.8320
ARITH. MEAN	0.0532	3.640	11.0194	2.6641	0.064	7.571	0.4920
ARITH. STD. DEV	0.0383	6.843	7.9350	1.3112	0.020	4.553	0.2581
GEOM. MEAN	0.0434	1.889	8.8579	2.3599	0.061	6.463	0.4012
GEOM. STD. DEV.	1.9042	2.591	1.9785	1.6940	1.394	1.793	2.1469
1ST QUARTILE	0.0265	0.993	4.5002	1.4692	0.047	3.993	0.2349
2ND QUARTILE	0.0332	1.633	7.0002	2.4935	0.065	6.949	0.5770
3RD QUARTILE	0.0799	2.713	16.0146	3.6620	0.080	10.190	0.6571
VOL. WGT. MEAN	0.0503	3.444	10.5374	2.5206	0.061	7.163	0.4655

CADMIUM

	MG/M**2
# OF SAMPLES	12
MAXIMUM	0.04090
MINIMUM	0.00580
RANGE	0.03510
ARITH. MEAN	0.01799
ARITH. STD. DEV	0.01099
GEOM. MEAN	0.01486
GEOM. STD. DEV.	1.95492
1ST QUARTILE	0.00790
2ND QUARTILE	0.01840
3RD QUARTILE	0.02591
VOL. WGT. MEAN	0.01702

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/MM2	TOTAL H+ TO PH6.3 MG/MM2	SULPHATE MG/MM2	NITRATE AS N MG/MM2	CALCIUM MG/MM2	CHLORIDE MG/MM2
# OF SAMPLES	13	12	12	13	13	13	13
MAXIMUM	248.0	13.6206	25.1472	1078.80	124.000	83.220	42.160
MINIMUM	32.0	2.0776	3.5968	123.20	17.520	13.760	4.550
RANGE	216.0	11.5510	21.5504	955.60	106.480	69.460	37.610
ARITH. MEAN	80.4	4.4873	7.5726	310.96	37.655	32.826	17.603
ARITH. STD. DEV.	55.3	3.0147	5.7890	243.16	27.383	21.627	11.829
GEOM. MEAN	69.2	3.9667	6.4830	264.50	32.699	28.135	13.985
GEOM. STD. DEV.	1.7	1.5884	1.6770	1.69	1.633	1.728	2.083
1ST QUANTILE	49.0	3.0508	4.9658	197.25	24.190	18.562	6.395
2ND QUANTILE	65.0	3.5699	5.6809	235.87	29.488	26.200	13.900
3RD QUANTILE	82.0	4.6921	8.2188	282.81	36.340	31.885	22.020
VOL. WGT. MEAN	*****	4.4533	7.5151	310.96	37.655	32.826	17.603

	KJELDAHL AS N MG/MM2	MAGNESIUM MG/MM2	POTASSIUM MG/MM2	SODIUM MG/MM2	AMMONIUM AS N MG/MM2	PHOSPHOR MG/MM2	MANGANESE MG/MM2
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	124.000	17.885	34.310	11.154	101.680	3.5770	0.9920
MINIMUM	16.302	2.800	0.214	0.840	0.858	0.3200	0.1410
RANGE	107.698	15.085	34.095	10.314	100.822	3.2570	0.8510
ARITH. MEAN	39.181	6.624	5.888	5.414	30.218	1.2978	0.3537
ARITH. STD. DEV.	28.128	4.194	9.225	3.115	25.898	0.9905	0.2103
GEOM. MEAN	33.582	5.763	2.731	4.338	19.754	1.0181	0.3147
GEOM. STD. DEV.	1.697	1.681	3.648	2.188	3.264	2.0530	1.6149
1ST QUANTILE	23.405	4.190	1.287	2.945	16.487	0.6135	0.2500
2ND QUANTILE	28.465	5.211	2.427	2.945	22.170	0.9845	0.3104
3RD QUANTILE	36.873	6.451	4.822	7.552	31.381	1.2080	0.3785
VOL. WGT. MEAN	39.181	6.624	5.888	5.414	30.218	1.2978	0.3537

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINIUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	13	12	12	12	13	12	12
MAXIMUM	0.2480	1.739	15.5570	3.2339	0.248	13.819	0.7472
MINIMUM	0.0160	0.215	1.4659	0.3347	0.032	1.129	0.0436
RANGE	0.2320	1.524	14.0911	2.8992	0.216	12.690	0.7036
ARITH. MEAN	0.0555	0.534	4.7226	0.8030	0.080	4.728	0.1655
ARITH. STD. DEV.	0.0610	0.403	3.8259	0.7879	0.055	3.633	0.2049
GEOM. MEAN	0.0406	0.456	3.8519	0.6390	0.069	3.736	0.1064
GEOM. STD. DEV.	2.0872	1.705	1.8607	1.8400	1.703	2.044	2.4078
1ST QUARTILE	0.0245	0.320	2.4327	0.4166	0.049	2.323	0.0608
2ND QUARTILE	0.0338	0.428	3.8980	0.6565	0.065	3.916	0.0745
3RD QUARTILE	0.0512	0.565	4.4877	0.7751	0.082	5.072	0.1806
VOL. WGT. MEAN	0.0555	0.530	4.6867	0.7970	0.080	4.692	0.1642

CADMIUM

	MG/MM#2
# OF SAMPLES	13
MAXIMUM	0.12400
MINIMUM	0.00175
RANGE	0.12225
ARITH. MEAN	0.01419
ARITH. STD. DEV.	0.03310
GEOM. MEAN	0.00569
GEOM. STD. DEV.	2.89942
1ST QUARTILE	0.00282
2ND QUARTILE	0.00410
3RD QUARTILE	0.00705
VOL. WGT. MEAN	0.01419

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/H#*2	TOTAL H+ TO PH8.3 MG/H#*2	SULPHATE MG/H#*2	NITRATE AS N MG/H#*2	CALCIUM MG/H#*2	CHLORIDE MG/H#*2
# OF SAMPLES	76	72	72	71	71	71	71
MAXIMUM	248.0	15.5029	25.3804	1080.70	124.000	106.400	98.560
MINIMUM	11.0	0.0004	0.4408	108.07	17.520	10.250	3.540
RANGE	237.0	15.5025	24.9396	972.63	106.480	96.150	95.020
ARITH. MEAN	74.2	4.0377	6.8989	325.33	38.699	34.010	19.430
ARITH. STD. DEV	42.3	2.7348	4.8750	222.79	20.860	19.614	15.435
GEOM. MEAN	64.3	2.8490	5.6955	274.90	34.995	29.279	15.363
GEOM. STD. DEV.	1.7	4.0294	1.9040	1.74	1.525	1.732	1.973
1ST QUARTILE	42.8	2.6443	4.2656	182.85	26.650	18.420	10.850
2ND QUARTILE	69.5	3.4506	5.7234	254.15	32.091	26.965	15.386
3RD QUARTILE	86.5	4.6729	7.7280	371.02	41.765	43.820	22.605
VOL. WGT. MEAN	*****	3.9628	6.7710	513.89	38.140	33.037	18.948

	KJELDAHL AS N MG/H#*2	MAGNESIUM MG/H#*2	POTASSIUM MG/H#*2	SODIUM MG/H#*2	AMMONIUM AS N MG/H#*2	PHOSPHOR MG/H#*2	MANGANESE MG/H#*2
# OF SAMPLES	74	71	70	71	74	73	73
MAXIMUM	233.700	23.275	65.075	38.570	146.300	22.2300	1.3300
MINIMUM	13.804	1.770	0.000	0.000	0.858	0.1080	0.0205
RANGE	219.896	21.505	65.075	38.570	145.442	22.1220	1.3095
ARITH. MEAN	49.833	7.944	4.994	6.355	36.227	1.5945	0.3873
ARITH. STD. DEV	42.765	4.910	9.056	5.954	29.212	2.887	0.2672
GEOM. MEAN	39.145	6.678	2.665	4.668	26.652	0.9929	0.3156
GEOM. STD. DEV.	1.933	1.808	2.858	2.174	2.393	2.2971	1.9498
1ST QUARTILE	22.933	4.234	1.169	2.175	17.449	0.5430	0.2235
2ND QUARTILE	38.960	5.972	2.020	4.972	27.585	0.9145	0.3060
3RD QUARTILE	56.045	9.675	4.780	7.649	46.263	1.3032	0.4245
VOL. WGT. MEAN	49.105	7.717	4.891	6.173	35.570	1.5841	0.3838

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

PART VI

SUMMARY STATISTICS OF WET DEPOSITION BY REGION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	73	68	68	68	73	68	68
MAXIMUM	0.2480	2.828	16.4493	3.3299	0.248	15.221	0.7472
MINIMUM	0.0095	0.184	1.0557	0.0639	0.011	0.782	0.0378
RANGE	0.2385	2.644	15.3936	3.2660	0.237	14.438	0.7094
ARITH. MEAN	0.0411	0.579	4.7122	0.6803	0.076	4.568	0.1174
ARITH. STD. DEV	0.0319	0.412	3.1779	0.5974	0.044	3.064	0.1174
GEOM. MEAN	0.0342	0.497	3.9172	0.5474	0.065	3.656	0.0916
GEOM. STD. DEV.	1.7912	1.668	1.8259	1.8724	1.761	2.009	1.8606
1ST QUARTILE	0.0220	0.370	2.5854	0.3764	0.043	2.154	0.0598
2ND QUARTILE	0.0350	0.444	3.8555	0.5147	0.069	4.355	0.0796
3RD QUARTILE	0.0485	0.641	6.1459	0.7310	0.089	5.834	0.1244
VOL. WGT. MEAN	0.0407	0.573	4.6688	0.6741	0.075	4.526	0.1163

CADMIUM

	MG/M**2
# OF SAMPLES	73
MAXIMUM	0.12400
MINIMUM	0.00150
RANGE	0.12250
ARITH. MEAN	0.00688
ARITH. STD. DEV	0.01486
GEOM. MEAN	0.00444
GEOM. STD. DEV.	2.01876
1ST QUARTILE	0.00290
2ND QUARTILE	0.00405
3RD QUARTILE	0.00551
VOL. WGT. MEAN	0.00682

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 1

# OF SAMPLES	PRECIP.	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM	CHLORIDE
	MM	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
38	34	33	34	35	33	35	
MAXIMUM	135.0	7.8124	14.4720	567.30	72.900	26.730	61.640
MINIMUM	16.1	0.0015	2.0884	38.75	1.340	2.359	0.000
RANGE	118.9	7.8110	12.3836	528.54	71.560	24.371	61.640
ARITH. MEAN	60.7	3.9091	6.1867	237.35	28.033	12.166	16.452
ARITH. STD. DEV.	34.7	2.0960	3.1563	136.93	13.737	6.840	15.420
GEOM. MEAN	51.3	2.7899	5.4194	197.09	23.872	9.983	11.451
GEOM. STD. DEV.	1.8	4.2393	1.7092	1.92	1.988	1.996	2.193
1ST QUANTILE	31.4	2.4371	3.6814	113.95	18.453	5.160	6.720
2ND QUANTILE	52.6	3.5258	5.2480	221.85	27.294	12.655	10.116
3RD QUANTILE	77.9	5.3711	8.4712	337.90	35.109	15.785	21.347
VOL. WGT. MEAN	*****	3.7579	5.9051	230.98	27.822	11.612	16.328

# OF SAMPLES	KJELDAHL AS N	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM AS N	PHOSPHOR	MANGANESE
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
35	33	33	33	33	33	35	35
MAXIMUM	770.500	9.715	194.970	56.615	65.100	79.7300	1.0200
MINIMUM	7.830	0.000	0.260	0.980	5.464	0.0132	0.0337
RANGE	762.670	9.715	194.710	55.635	59.636	79.7167	0.9863
ARITH. MEAN	50.616	2.360	8.207	11.593	23.841	3.0265	0.2147
ARITH. STD. DEV.	126.720	2.062	33.560	13.539	14.700	13.3643	0.1955
GEOM. MEAN	26.611	1.841	2.095	6.380	19.742	0.5305	0.1589
GEOM. STD. DEV.	2.371	2.060	3.154	3.117	1.892	4.3679	2.1979
1ST QUANTILE	15.177	0.928	0.902	2.534	11.569	0.1912	0.0757
2ND QUANTILE	23.990	1.683	2.321	6.389	18.960	0.6425	0.1950
3RD QUANTILE	41.965	3.110	3.072	14.175	32.534	1.0960	0.2510
VOL. WGT. MEAN	50.235	2.252	7.834	11.065	23.254	3.0037	0.2131

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3, 84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	35	33	33	33	35	33	33
MAXIMUM	4.9950	8.161	177.1200	3.2319	0.180	67.800	7.4169
MINIMUM	0.0110	0.122	0.8760	0.1820	0.016	0.832	0.0388
RANGE	4.9840	8.039	176.2439	3.0499	0.164	66.968	7.3781
ARITH. MEAN	0.5349	0.797	12.8513	0.6802	0.065	6.314	0.7738
ARITH. STD. DEV.	1.1484	1.378	31.0841	0.5286	0.041	11.760	1.3719
GEOM. MEAN	0.1471	0.516	5.4050	0.5717	0.054	3.410	0.3335
GEOM. STD. DEV.	4.9691	2.174	2.9961	1.7570	1.903	2.641	3.5864
1ST QUARTILE	0.0390	0.346	3.3676	0.4233	0.031	1.596	0.1559
2ND QUARTILE	0.1253	0.513	4.4855	0.5611	0.048	2.756	0.2979
3RD QUARTILE	0.4150	0.652	7.8124	0.7842	0.092	4.729	0.6969
VOL. WGT. MEAN	0.5308	0.776	12.5166	0.6625	0.065	6.150	0.7536

CADMIUM

	MG/M**2
# OF SAMPLES	35
MAXIMUM	0.16200
MINIMUM	0.00173
RANGE	0.16026
ARITH. MEAN	0.02325
ARITH. STD. DEV.	0.02772
GEOM. MEAN	0.01458
GEOM. STD. DEV.	2.79645
1ST QUARTILE	0.00737
2ND QUARTILE	0.01549
3RD QUARTILE	0.02908
VOL. WGT. MEAN	0.02308

PART VII

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURMASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

# OF SAMPLES	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAM	MG/L	AS N
MAXIMUM	11	10	10	10	10	10	10
MINIMUM	122.0	82.0	4.93	0.1349	0.1920	6.05	1.620
RANGE	21.5	6.6	3.67	0.0117	0.0279	0.80	0.080
ARITH. MEAN	100.5	75.4	1.06	0.1231	0.1641	5.25	1.540
GEOM. MEAN	35.1	20.0	4.28	0.0609	0.0885	2.75	0.589
ARITH. STD. DEV.	33.2	29.9	0.27	0.0319	0.0423	1.43	0.501
GEOM. STD. DEV.	54.2	1.9	4.27	0.0527	0.0802	2.44	0.419
1ST QUARTILE	1.7	24.4	1.06	1.8690	1.6173	1.71	2.504
2ND QUARTILE	32.0	29.7	4.12	0.0443	0.0699	1.85	0.200
3RD QUARTILE	49.7	38.3	4.25	0.0562	0.0765	2.60	0.430
VOL. WGT. MEAN	78.5	30.6	4.32	0.0680	0.0955	2.88	0.635
	*****		*****	0.0552	0.0788	2.63	0.448

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
# OF SAMPLES	9	10	9	9	9	9	10
MAXIMUM	0.410	3.300	0.880	0.070	0.050	1.950	0.630
MINIMUM	0.030	0.020	0.120	0.000	0.000	0.000	0.000
RANGE	0.380	3.280	0.760	0.070	0.050	1.950	0.630
ARITH. MEAN	0.162	0.738	0.400	0.027	0.018	0.356	0.258
ARITH. STD. DEV.	0.121	1.109	0.216	0.021	0.018	0.625	0.169
GEOM. MEAN	0.124	0.264	0.351	0.038	0.020	0.184	0.291
GEOM. STD. DEV.	2.242	4.772	1.747	2.075	3.178	4.125	1.676
1ST QUARTILE	0.075	0.095	0.260	0.012	0.004	0.027	0.125
2ND QUARTILE	0.095	0.175	0.360	0.017	0.006	0.072	0.262
3RD QUARTILE	0.210	0.610	0.430	0.035	0.025	0.235	0.303
VOL. WGT. MEAN	0.129	0.444	0.350	0.021	0.016	0.197	0.244

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9	9	9	9	9
MAXIMUM :	0.0170	5.00	26.00	21.23	226.70	24.34	1.00
MINIMUM :	0.0005	0.50	0.50	1.23	5.96	3.89	0.20
RANGE :	0.0165	4.50	25.50	20.00	220.74	20.45	0.80
ARITH. MEAN :	0.0062	1.83	4.19	7.31	52.13	9.14	0.82
ARITH. STD. DEV :	0.0063	1.56	8.39	7.00	68.80	6.69	0.35
GEOM. MEAN :	0.0035	1.31	1.23	4.86	29.79	7.54	0.70
GEOM. STD. DEV. :	3.4193	2.42	4.35	2.68	2.98	1.87	2.03
1ST QUARTILE :	0.0012	0.50	0.50	2.42	14.73	4.30	0.60
2ND QUARTILE :	0.0035	1.00	0.50	4.12	24.22	6.08	1.00
3RD QUARTILE :	0.0065	2.50	1.60	6.80	41.49	9.36	1.00
VOL. WGT. MEAN :	0.0045	1.45	1.96	5.13	32.57	7.06	0.86

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9
MAXIMUM :	117.20	53.37	1.30
MINIMUM :	8.14	0.77	0.05
RANGE :	109.06	52.60	1.25
ARITH. MEAN :	38.06	9.79	0.28
ARITH. STD. DEV :	33.98	17.08	0.39
GEOM. MEAN :	27.71	3.65	0.17
GEOM. STD. DEV. :	2.33	4.08	2.60
1ST QUARTILE :	14.37	1.00	0.10
2ND QUARTILE :	21.97	2.94	0.10
3RD QUARTILE :	44.72	4.61	0.23
VOL. WGT. MEAN :	28.91	4.83	0.17

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3.84 TO JAN 2.85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
10	10	10	10	10	10	10	10
MAXIMUM	141.0	60.5	4.76	0.0871	0.1190	0.15	1.080
MINIMUM	14.0	25.5	4.06	0.0174	0.0548	2.15	0.440
RANGE	127.0	35.0	0.70	0.0697	0.0642	6.00	0.640
ARITH. MEAN	83.4	38.8	4.30	0.0548	0.0848	4.45	0.692
ARITH. STD. DEV	37.7	10.6	0.22	0.0225	0.0227	1.70	0.215
GEOM. MEAN	72.1	37.6	4.30	0.0498	0.0621	4.18	0.663
GEOM. STD. DEV.	1.9	1.3	1.05	1.6408	1.3102	1.46	1.362
1ST QUARTILE	55.5	29.5	4.11	0.0369	0.0637	3.22	0.480
2ND QUARTILE	78.3	37.6	4.30	0.0510	0.0815	3.95	0.660
3RD QUARTILE	112.0	40.9	4.35	0.0717	0.0982	5.20	0.810
VOL. WGT. MEAN	*****	37.6	*****	0.0506	0.0806	4.40	0.662

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
10	10	10	10	10	10	10	10
MAXIMUM	2.350	0.760	1.780	0.450	0.270	0.385	1.600
MINIMUM	0.140	0.160	0.330	0.040	0.020	0.040	0.232
RANGE	2.210	0.600	1.450	0.410	0.250	0.345	1.368
ARITH. MEAN	0.641	0.394	0.794	0.116	0.070	0.177	0.676
ARITH. STD. DEV	0.664	0.234	0.419	0.123	0.076	0.130	0.405
GEOM. MEAN	0.453	0.340	0.709	0.085	0.050	0.134	0.580
GEOM. STD. DEV.	2.298	1.755	1.645	2.121	2.265	2.275	1.793
1ST QUARTILE	0.255	0.215	0.455	0.042	0.025	0.065	0.332
2ND QUARTILE	0.400	0.305	0.695	0.070	0.042	0.132	0.592
3RD QUARTILE	0.620	0.495	0.910	0.118	0.070	0.238	0.813
VOL. WGT. MEAN	0.630	0.375	0.793	0.121	0.070	0.166	0.664

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	10	10	10	10	10	10	10
MAXIMUM	0.0780	37.00	2.00	28.26	439.30	13.01	2.00
MINIMUM	0.0050	2.00	0.40	5.85	22.93	6.35	0.20
RANGE	0.0730	35.00	1.60	22.41	416.37	6.66	1.80
ARITH. MEAN	0.0254	9.60	0.84	12.44	100.82	8.74	0.88
ARITH. STD. DEV.	0.0257	10.96	0.63	6.78	133.48	2.27	0.52
GEOM. MEAN	0.0170	6.25	0.70	11.06	59.48	8.49	0.72
GEOM. STD. DEV.	2.5029	2.50	1.81	1.65	2.65	1.28	2.11
1ST QUARTILE	0.0080	3.00	0.50	6.84	28.83	6.84	0.35
2ND QUARTILE	0.0140	6.00	0.50	11.49	42.69	7.78	1.00
3RD QUARTILE	0.0260	8.00	0.75	14.85	70.10	10.09	1.00
VOL. WGT. MEAN	0.0245	9.33	0.79	12.54	100.37	8.12	0.81

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	10	10	10
MAXIMUM	539.00	4.01	0.40
MINIMUM	19.11	0.77	0.07
RANGE	519.89	3.24	0.33
ARITH. MEAN	114.40	1.93	0.17
ARITH. STD. DEV.	166.22	1.27	0.11
GEOM. MEAN	61.16	1.61	0.15
GEOM. STD. DEV.	2.86	1.87	1.75
1ST QUARTILE	28.19	0.88	0.10
2ND QUARTILE	50.31	1.31	0.11
3RD QUARTILE	62.06	2.62	0.19
VOL. WGT. MEAN	115.10	1.74	0.19

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
10	10	10	10	10	10	10	10
MAXIMUM	146.0	61.0	7.04	0.0912	0.1060	12.40	1.580
MINIMUM	11.6	20.4	4.04	0.0001	0.0143	3.45	0.410
RANGE	134.4	40.6	3.00	0.0911	0.0937	8.95	1.170
ARITH. MEAN	73.9	44.2	5.32	0.0274	0.0535	7.01	0.841
ARITH. STD. DEV	39.9	14.7	1.15	0.0336	0.0356	2.55	0.372
GEOM. MEAN	61.4	41.4	5.21	0.0048	0.0425	6.61	0.768
GEOM. STD. DEV.	2.1	1.5	1.24	14.0860	2.1027	1.45	1.577
1ST QUARTILE	38.0	27.1	4.24	0.0003	0.0216	4.85	0.465
2ND QUARTILE	72.1	47.9	5.22	0.0077	0.0439	7.57	0.895
3RD QUARTILE	87.6	54.1	5.98	0.0501	0.0758	8.02	0.980
VOL. WGT. MEAN	*****	43.3	*****	0.0393	0.0648	6.96	0.735

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
9	9	9	9	9	9	8	10
MAXIMUM	8.000	1.050	2.750	0.850	1.050	0.350	2.250
MINIMUM	1.050	0.270	0.530	0.245	0.005	0.055	0.500
RANGE	6.950	0.780	2.220	0.605	1.045	0.295	1.750
ARITH. MEAN	2.533	0.531	1.162	0.468	0.181	0.168	0.927
ARITH. STD. DEV	2.204	0.263	0.673	0.226	0.333	0.110	0.512
GEOM. MEAN	2.022	0.478	1.028	0.424	0.068	0.139	0.840
GEOM. STD. DEV.	1.917	1.625	1.666	1.593	4.209	1.935	1.552
1ST QUARTILE	1.190	0.300	0.695	0.277	0.045	0.087	0.600
2ND QUARTILE	1.710	0.425	0.960	0.370	0.050	0.118	0.765
3RD QUARTILE	2.125	0.635	1.230	0.512	0.072	0.265	0.905
VOL. WGT. MEAN	1.939	0.455	1.013	0.388	0.122	0.143	0.823

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTES : PRECIP. VALUES REPORTED TO DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

# OF SAMPLES	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
:	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
MAXIMUM	9	9	9	9	9	9	9
MINIMUM	0.4200	17.00	8.00	179.90	273.20	72.73	15.00
RANGE	0.0050	4.00	0.50	15.53	45.53	9.97	1.00
ARITH. MEAN	0.4150	13.00	7.50	164.37	227.67	62.76	14.00
ARITH. STD. DEV.	0.0706	8.56	1.93	45.34	134.20	29.80	5.72
GEOM. MEAN	0.1338	4.75	2.43	51.99	78.35	20.64	4.68
GEOM. STD. DEV.	0.0259	7.57	1.18	32.40	114.47	24.70	4.01
1ST QUARTILE	0.0095	1.67	2.68	2.14	1.85	1.89	2.63
2ND QUARTILE	0.0185	5.00	0.50	18.55	75.07	16.44	1.50
3RD QUARTILE	0.0295	7.00	0.80	23.80	104.60	19.99	4.95
VOL. WGT. MEAN	0.0478	8.00	1.65	36.87	147.10	31.13	5.80
		7.23	1.11	29.94	117.47	25.50	4.41

# OF SAMPLES	ALUMINUM	COPPER	CADMIUM
:	UG/L	UG/L	UG/L
MAXIMUM	9	9	9
MINIMUM	356.30	222.10	1.00
RANGE	47.71	4.46	0.10
ARITH. MEAN	308.59	217.64	0.90
ARITH. STD. DEV.	143.21	58.01	0.23
GEOM. MEAN	102.08	70.48	0.29
GEOM. STD. DEV.	116.56	15.86	0.16
1ST QUARTILE	1.96	3.29	2.10
2ND QUARTILE	67.34	8.31	0.10
3RD QUARTILE	99.94	9.82	0.11
VOL. WGT. MEAN	162.05	13.77	0.17
	173.27	15.78	0.14

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HARNER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAXIMUM	103.0	85.0	4.67	0.1660	0.2210	6.90	1.760
MINIMUM	18.2	14.3	3.78	0.0214	0.0459	1.55	0.140
RANGE	84.8	70.7	0.89	0.1446	0.1751	5.35	1.620
ARITH. MEAN	43.9	44.8	4.19	0.0782	0.1169	3.29	0.900
ARITH. STD. DEV.	31.2	27.7	0.32	0.0533	0.0645	2.08	0.658
GEOM. MEAN	36.9	37.7	4.18	0.0643	0.1035	2.89	0.660
GEOM. STD. DEV.	1.9	2.0	1.08	2.0778	1.7569	1.72	2.698
1ST QUARTILE	20.6	21.5	3.95	0.0422	0.0711	2.02	0.360
2ND QUARTILE	33.4	32.8	4.15	0.0638	0.0979	2.52	0.605
3RD QUARTILE	42.8	47.9	4.19	0.0702	0.1107	2.75	1.010
VOL. WGT. MEAN	*****	42.7	*****	0.0807	0.1197	3.39	0.854

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
MAXIMUM	0.550	4.600	0.870	0.075	0.080	3.880	0.690
MINIMUM	0.140	0.200	0.180	0.030	0.008	0.155	0.045
RANGE	0.410	4.400	0.690	0.045	0.072	3.725	0.645
ARITH. MEAN	0.276	1.360	0.438	0.043	0.036	1.166	0.282
ARITH. STD. DEV.	0.162	1.843	0.260	0.019	0.027	1.576	0.247
GEOM. MEAN	0.246	0.716	0.384	0.040	0.028	0.552	0.199
GEOM. STD. DEV.	1.683	3.397	1.765	1.454	2.371	3.947	2.739
1ST QUARTILE	0.168	0.255	0.260	0.030	0.016	0.160	0.092
2ND QUARTILE	0.205	0.460	0.345	0.035	0.027	0.298	0.195
3RD QUARTILE	0.255	0.845	0.400	0.040	0.035	0.815	0.267
VOL. WGT. MEAN	0.269	0.989	0.443	0.042	0.036	0.846	0.274

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

# OF SAMPLES	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
MAXIMUM	5	4	4	4	4	4	4
MINIMUM	0.0550	16.00	63.00	67.88	404.60	44.94	1.00
RANGE	0.0015	2.00	0.50	13.34	42.37	7.42	0.20
ARITH. MEAN	0.0535	14.00	62.50	54.54	362.23	37.52	0.80
ARITH. STD. DEV	0.0209	5.50	25.38	31.01	137.88	26.18	0.60
GEOM. MEAN	0.0202	7.00	26.61	24.93	177.91	16.50	0.46
GEOM. STD. DEV.	0.0127	3.36	10.30	25.32	82.60	21.40	0.45
1ST QUARTILE	3.7254	2.83	8.14	2.01	2.90	2.21	2.53
2ND QUARTILE	0.0072	2.00	8.75	16.38	45.20	13.05	0.20
3RD QUARTILE	0.0150	2.00	19.00	21.40	57.28	26.18	0.60
VOL. WGT. MEAN	0.0175	9.00	42.00	45.63	230.57	39.31	1.00
	0.0306	5.29	25.92	28.57	132.19	25.40	0.51

ALUMINIUM

COPPER

CADMIUM

# OF SAMPLES	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
MAXIMUM	4	4	4
MINIMUM	151.70	73.88	25.00
RANGE	35.62	4.71	0.20
ARITH. MEAN	116.08	69.17	24.80
ARITH. STD. DEV	77.31	40.87	6.83
GEOM. MEAN	51.47	29.26	12.12
GEOM. STD. DEV.	66.62	27.81	1.49
1ST QUARTILE	1.85	3.41	7.72
2ND QUARTILE	44.08	19.03	0.45
3RD QUARTILE	60.96	42.44	1.05
VOL. WGT. MEAN	110.53	62.71	13.20
	81.09	41.29	6.44

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVERY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

	PRECIP.		CONDUCT.		PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
	MM		UMHO/CM						
# OF SAMPLES	13		12		12	12	12	12	12
MAXIMUM	145.0		55.3		7.29	0.1072	0.1440	5.60	1.150
MINIMUM	20.0		27.5		3.97	0.0001	0.0374	1.95	0.130
RANGE	125.0		27.8		3.32	0.1071	0.1066	3.65	1.020
ARITH. MEAN	65.4		38.7		4.45	0.0614	0.0928	3.53	0.551
ARITH. STD. DEV	43.2		9.6		0.90	0.0268	0.0281	1.08	0.323
GEOM. MEAN	53.3		37.7		4.39	0.0355	0.0883	3.37	0.466
GEOM. STD. DEV.	2.0		1.3		1.18	7.9955	1.4129	1.38	1.880
1ST QUARTILE	28.4		30.6		4.10	0.0525	0.0806	2.68	0.370
2ND QUARTILE	46.1		35.5		4.22	0.0603	0.0882	3.42	0.460
3RD QUARTILE	81.0		47.5		4.28	0.0795	0.1115	4.22	0.715
VOL. WGT. MEAN	*****		36.0		*****	0.0546	0.0837	3.50	0.444

	CALCIUM		CHLORIDE		KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
	MG/L		MG/L						
# OF SAMPLES	11		12		12	11	11	11	12
MAXIMUM	0.640		0.910		7.100	0.190	1.070	0.590	5.700
MINIMUM	0.080		0.100		0.130	0.015	0.002	0.025	0.010
RANGE	0.560		0.810		6.970	0.175	1.067	0.565	5.690
ARITH. MEAN	0.249		0.367		1.024	0.049	0.130	0.197	0.799
ARITH. STD. DEV	0.190		0.301		1.927	0.053	0.315	0.191	1.557
GEOM. MEAN	0.200		0.265		0.518	0.034	0.019	0.120	0.326
GEOM. STD. DEV.	1.952		2.351		2.730	2.277	7.383	2.988	4.208
1ST QUARTILE	0.110		0.120		0.305	0.015	0.002	0.040	0.223
2ND QUARTILE	0.175		0.220		0.465	0.025	0.012	0.105	0.390
3RD QUARTILE	0.255		0.555		0.725	0.047	0.075	0.345	0.493
VOL. WGT. MEAN	0.230		0.275		1.210	0.048	0.163	0.154	0.942

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	0.5500	8.00	72.00	19.26	1300.00	20.19	1.00
MINIMUM	0.0000	0.50	6.00	3.90	21.00	5.44	0.20
RANGE	0.5500	7.50	66.00	15.36	1279.00	14.75	0.80
ARITH. MEAN	0.0587	2.96	25.67	8.01	234.84	12.45	0.87
ARITH. STD. DEV.	0.1554	2.22	19.12	4.62	347.30	4.40	0.31
GEOM. MEAN	0.0329	2.27	19.49	7.04	130.41	11.70	0.76
GEOM. STD. DEV.	4.9750	2.21	2.26	1.67	2.93	1.46	1.87
1ST QUARTILE	0.0035	1.50	9.00	4.31	73.73	9.55	1.00
2ND QUARTILE	0.0115	2.00	24.50	6.23	120.25	12.00	1.00
3RD QUARTILE	0.0235	4.00	32.00	9.99	251.00	15.59	1.00
VOL. WGT. MEAN	0.0739	3.17	23.06	7.30	152.33	11.62	0.90

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	12	12	12
MAXIMUM	456.20	121.40	0.90
MINIMUM	15.45	5.44	0.20
RANGE	440.75	115.96	0.70
ARITH. MEAN	99.51	42.26	0.47
ARITH. STD. DEV.	116.79	36.28	0.24
GEOM. MEAN	68.51	28.45	0.42
GEOM. STD. DEV.	2.33	2.70	1.68
1ST QUARTILE	38.03	11.49	0.30
2ND QUARTILE	72.44	37.24	0.35
3RD QUARTILE	103.32	60.65	0.70
VOL. WGT. MEAN	74.28	36.41	0.45

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3-84 TO JAN 2-85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
13	13	13	13	13	13	13	13
MAXIMUM	130.0	60.5	4.79	0.1023	0.1380	6.40	0.920
MINIMUM	15.8	23.0	3.99	0.0162	0.0471	2.25	0.340
RANGE	114.2	37.5	0.80	0.0861	0.0909	4.15	0.580
ARITH. MEAN	70.3	40.3	4.23	0.0650	0.0949	4.16	0.625
ARITH. STD. DEV	33.8	11.7	0.23	0.0260	0.0273	1.24	0.153
GEOM. MEAN	60.7	38.6	4.23	0.0587	0.0908	3.98	0.607
GEOM. STD. DEV.	1.9	1.4	1.05	1.6807	1.3784	1.38	1.289
1ST QUARTILE	45.5	27.6	4.06	0.0389	0.0687	3.20	0.530
2ND QUARTILE	67.0	41.4	4.16	0.0676	0.0951	4.15	0.575
3RD QUARTILE	90.5	46.8	4.31	0.0832	0.1145	4.77	0.685
VOL. WGT. MEAN	*****	37.2	*****	0.0500	0.0874	4.00	0.586

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
13	13	13	13	13	13	13	13
MAXIMUM	1.090	0.750	0.850	0.260	0.040	0.310	0.700
MINIMUM	0.100	0.150	0.330	0.045	0.005	0.020	0.268
RANGE	0.990	0.600	0.520	0.215	0.035	0.290	0.432
ARITH. MEAN	0.535	0.345	0.528	0.118	0.027	0.096	0.441
ARITH. STD. DEV	0.265	0.194	0.145	0.062	0.011	0.074	0.134
GEOM. MEAN	0.465	0.301	0.511	0.105	0.023	0.076	0.423
GEOM. STD. DEV.	1.832	1.721	1.303	1.662	2.008	2.058	1.353
1ST QUARTILE	0.360	0.175	0.420	0.077	0.022	0.045	0.332
2ND QUARTILE	0.450	0.260	0.485	0.095	0.030	0.080	0.387
3RD QUARTILE	0.690	0.440	0.600	0.125	0.030	0.105	0.543
VOL. WGT. MEAN	0.557	0.299	0.503	0.126	0.027	0.089	0.412

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.0280	29.00	0.60	14.96	353.60	12.22	1.00
MINIMUM	0.0020	2.00	0.30	5.20	22.80	4.24	0.20
RANGE	0.0260	27.00	0.30	9.76	330.80	7.98	0.80
ARITH. MEAN	0.0116	6.46	0.48	8.28	86.02	7.97	0.86
ARITH. STD. DEV.	0.0085	7.01	0.07	2.59	87.52	2.56	0.25
GEOM. MEAN	0.0090	4.90	0.47	7.94	63.15	7.57	0.80
GEOM. STD. DEV.	2.1289	1.96	1.19	1.34	2.15	1.41	1.59
1ST QUARTILE	0.0060	4.00	0.45	6.04	37.54	5.26	0.75
2ND QUARTILE	0.0070	4.00	0.50	8.67	51.89	7.92	1.00
3RD QUARTILE	0.0155	5.00	0.50	8.99	87.45	9.40	1.00
VOL. WGT. MEAN	0.0132	6.99	0.48	7.57	93.86	7.39	0.86

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	13	13	13
MAXIMUM	448.90	1.39	0.40
MINIMUM	22.55	0.58	0.08
RANGE	426.35	0.81	0.32
ARITH. MEAN	93.34	1.01	0.15
ARITH. STD. DEV.	114.11	0.25	0.09
GEOM. MEAN	62.61	0.98	0.13
GEOM. STD. DEV.	2.31	1.29	1.55
1ST QUARTILE	33.62	0.85	0.10
2ND QUARTILE	46.18	0.96	0.10
3RD QUARTILE	92.38	1.10	0.15
VOL. WGT. MEAN	101.83	0.97	0.16

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
12	12	12	11	11	12	12	12
MAXIMUM	94.6	60.2	7.61	0.0871	0.1230	8.00	1.250
MINIMUM	21.0	23.2	4.06	0.0000	0.0170	2.85	0.460
RANGE	73.6	37.0	3.55	0.0871	0.1060	5.15	0.790
ARITH. MEAN	52.3	39.1	5.15	0.0373	0.0640	5.08	0.764
ARITH. STD. DEV	23.5	12.8	1.30	0.0334	0.0389	1.30	0.233
GEOM. MEAN	47.5	37.2	5.01	0.0070	0.0518	4.93	0.734
GEOM. STD. DEV.	1.6	1.4	1.28	24.1139	2.0595	1.30	1.345
1ST QUARTILE	34.2	29.1	4.11	0.0001	0.0252	4.45	0.600
2ND QUARTILE	45.0	35.5	4.41	0.0269	0.0571	5.05	0.690
3RD QUARTILE	74.0	49.1	5.92	0.0645	0.1007	5.68	0.935
VOL. WGT. MEAN	*****	39.7	*****	0.0358	0.0632	5.06	0.756

1 65 1

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
12	12	12	12	12	12	12	12
MAXIMUM	4.000	5.450	1.180	0.480	0.105	3.480	1.050
MINIMUM	0.600	0.100	0.250	0.080	0.005	0.020	0.188
RANGE	3.400	5.350	0.930	0.400	0.100	3.460	0.862
ARITH. MEAN	1.657	1.607	0.633	0.281	0.053	0.941	0.539
ARITH. STD. DEV	1.022	2.000	0.233	0.140	0.029	1.269	0.217
GEOM. MEAN	1.397	0.781	0.593	0.246	0.044	0.339	0.498
GEOM. STD. DEV.	1.846	3.546	1.476	1.760	2.210	5.016	1.536
1ST QUARTILE	0.810	0.365	0.480	0.160	0.035	0.105	0.397
2ND QUARTILE	1.540	0.570	0.650	0.257	0.067	0.280	0.532
3RD QUARTILE	2.275	2.690	0.720	0.425	0.065	1.585	0.627
VOL. WGT. MEAN	1.755	1.816	0.603	0.282	0.053	1.101	0.507

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.0290	16.00	1.20	53.93	256.80	73.23	1.00
MINIMUM :	0.0010	3.00	0.50	6.95	30.01	10.85	0.40
RANGE :	0.0280	13.00	0.70	46.98	226.79	62.38	0.60
ARITH. MEAN :	0.0111	9.00	0.64	27.61	135.13	36.05	0.92
ARITH. STD. DEV :	0.0092	4.11	0.26	16.42	79.58	20.50	0.20
GEOM. MEAN :	0.0070	8.07	0.60	23.16	111.14	30.64	0.89
GEOM. STD. DEV. :	3.1514	1.66	1.41	1.90	2.00	1.85	1.34
1ST QUANTILE :	0.0032	5.50	0.50	15.06	61.32	18.62	1.00
2ND QUANTILE :	0.0085	9.00	0.50	22.70	123.22	33.52	1.00
3RD QUANTILE :	0.0180	12.50	0.75	40.97	198.90	55.54	1.00
VOL. WGT. MEAN :	0.0104	9.02	0.62	28.26	136.80	36.87	0.92

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12
MAXIMUM :	255.10	13.55	19.00
MINIMUM :	43.41	0.98	0.10
RANGE :	211.69	12.57	18.90
ARITH. MEAN :	116.26	5.64	1.79
ARITH. STD. DEV :	65.67	3.69	5.42
GEOM. MEAN :	100.28	4.74	0.29
GEOM. STD. DEV. :	1.77	2.06	4.21
1ST QUANTILE :	63.58	3.25	0.10
2ND QUANTILE :	96.90	5.19	0.25
3RD QUANTILE :	160.70	8.41	0.38
VOL. WGT. MEAN :	112.61	5.61	1.48

PART VIII

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP.		CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	MM	UMHO/CM	LAB	LAB	GRAM	MG/L	AS N
# OF SAMPLES	23		23	23	23	23	23	23
MAXIMUM	141.0		60.5	4.79	0.1023	0.1380	8.15	1.080
MINIMUM	14.0		23.0	3.99	0.0182	0.0471	2.15	0.340
RANGE	127.0		37.5	0.80	0.0861	0.0909	6.00	0.740
ARITH. MEAN	76.0		39.7	4.26	0.0605	0.0905	4.29	0.654
ARITH. STD. DEV	35.3		11.0	0.22	0.0245	0.0254	1.43	0.182
GEOM. MEAN	65.4		39.2	4.26	0.0546	0.0869	4.07	0.631
GEOM. STD. DEV.	1.9		1.3	1.05	1.6558	1.3668	1.40	1.318
1ST QUARTILE	52.0		28.5	4.08	0.0389	0.0657	3.20	0.530
2ND QUARTILE	75.0		39.8	4.17	0.0625	0.0891	4.02	0.600
3RD QUARTILE	101.3		46.8	4.38	0.0804	0.1145	5.07	0.780
VOL. WGT. MEAN	*****		37.4	*****	0.0545	0.0841	4.19	0.622

	CALCIUM		CHLORIDE	KJELDAHL	MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM
	MG/L	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
# OF SAMPLES	23		23	23	23	23	23	23
MAXIMUM	2.350		0.760	1.780	0.450	0.270	0.365	1.600
MINIMUM	0.100		0.150	0.330	0.040	0.005	0.020	0.232
RANGE	2.250		0.610	1.450	0.410	0.265	0.365	1.368
ARITH. MEAN	0.581		0.367	0.643	0.117	0.046	0.131	0.543
ARITH. STD. DEV	0.471		0.209	0.319	0.091	0.054	0.108	0.301
GEOM. MEAN	0.460		0.317	0.589	0.096	0.032	0.097	0.485
GEOM. STD. DEV.	2.004		1.720	1.505	0.055	2.302	2.230	1.590
1ST QUARTILE	0.300		0.195	0.420	0.055	0.022	0.047	0.332
2ND QUARTILE	0.415		0.285	0.560	0.092	0.030	0.090	0.470
3RD QUARTILE	0.710		0.495	0.700	0.124	0.060	0.125	0.592
VOL. WGT. MEAN	0.592		0.336	0.642	0.124	0.060	0.126	0.532

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE (1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIGHAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3.84 TO JAN 2.85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	23	23	23	23	23	23	23
MAXIMUM	0.0780	37.00	2.00	26.26	439.30	13.01	2.00
MINIMUM	0.0020	2.00	0.30	5.20	22.80	4.24	0.20
RANGE	0.0760	35.00	1.70	23.06	416.50	8.77	1.80
ARITH. MEAN	0.0176	7.83	0.63	10.09	92.46	8.31	0.87
ARITH. STD. DEV.	0.0179	8.86	0.44	5.19	107.34	2.42	0.38
GEOM. MEAN	0.0119	5.45	0.56	9.17	61.53	7.96	0.76
GEOM. STD. DEV.	2.3879	2.18	1.56	1.53	2.32	1.36	1.81
1ST QUARTILE	0.0060	3.00	0.50	6.53	32.03	6.47	0.60
2ND QUARTILE	0.0090	4.50	0.50	8.76	47.18	7.92	1.00
3RD QUARTILE	0.0195	7.50	0.50	11.52	89.71	9.97	1.00
VOL. MGT. MEAN	0.0186	8.10	0.62	9.94	96.97	7.74	0.84

ALUMINIUM

COPPER

CADMIUM

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	23	23	23
MAXIMUM	539.00	4.01	0.40
MINIMUM	19.11	0.58	0.07
RANGE	519.89	3.43	0.33
ARITH. MEAN	102.50	1.41	0.16
ARITH. STD. DEV.	136.09	0.95	0.09
GEOM. MEAN	61.98	1.21	0.14
GEOM. STD. DEV.	2.49	1.67	1.63
1ST QUARTILE	30.34	0.86	0.10
2ND QUARTILE	49.32	1.02	0.10
3RD QUARTILE	92.38	1.37	0.19
VOL. MGT. MEAN	108.16	1.34	0.17

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

# OF SAMPLES	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAM MG/L	SULPHATE MG/L	NITRATE AS N MG/L
:	30	27	27	27	27	27	27
MAXIMUM	145.0	85.0	7.29	0.1660	0.2210	6.90	1.760
MINIMUM	6.6	6.6	3.78	0.0001	0.0279	0.80	0.080
RANGE	138.4	78.4	3.51	0.1659	0.1931	6.10	1.680
ARITH. MEAN	59.0	38.5	4.34	0.0643	0.0957	3.20	0.630
ARITH. STD. DEV.	36.2	17.5	0.63	0.0337	0.0413	1.42	0.464
GEOM. MEAN	47.2	34.6	4.31	0.0459	0.0878	2.91	0.478
GEOM. STD. DEV.	2.0	1.7	1.12	4.2674	1.5423	1.58	2.224
1ST QUARTILE	28.4	20.1	4.11	0.0479	0.0727	2.07	0.305
2ND QUARTILE	47.3	33.3	4.21	0.0603	0.0882	2.85	0.470
3RD QUARTILE	78.5	47.5	4.30	0.0759	0.1045	4.07	0.790
VOL. WGT. MEAN	*****	34.9	*****	0.0585	0.0869	3.16	0.503

# OF SAMPLES	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
:	25	27	26	25	25	25	27
MAXIMUM	0.640	4.600	7.100	0.190	1.070	3.880	5.700
MINIMUM	0.030	0.020	0.120	0.000	0.000	0.000	0.000
RANGE	0.610	4.580	6.980	0.190	1.070	3.880	5.700
ARITH. MEAN	0.223	0.689	0.695	0.040	0.071	0.448	0.503
ARITH. STD. DEV.	0.163	1.059	1.325	0.039	0.211	0.836	1.057
GEOM. MEAN	0.176	0.318	0.427	0.037	0.021	0.190	0.285
GEOM. STD. DEV.	2.064	3.459	2.210	1.998	4.515	3.857	2.927
1ST QUARTILE	0.095	0.120	0.300	0.015	0.005	0.047	0.147
2ND QUARTILE	0.180	0.230	0.395	0.030	0.020	0.137	0.275
3RD QUARTILE	0.250	0.710	0.620	0.040	0.037	0.377	0.438
VOL. WGT. MEAN	0.198	0.444	0.791	0.037	0.091	0.275	0.586

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

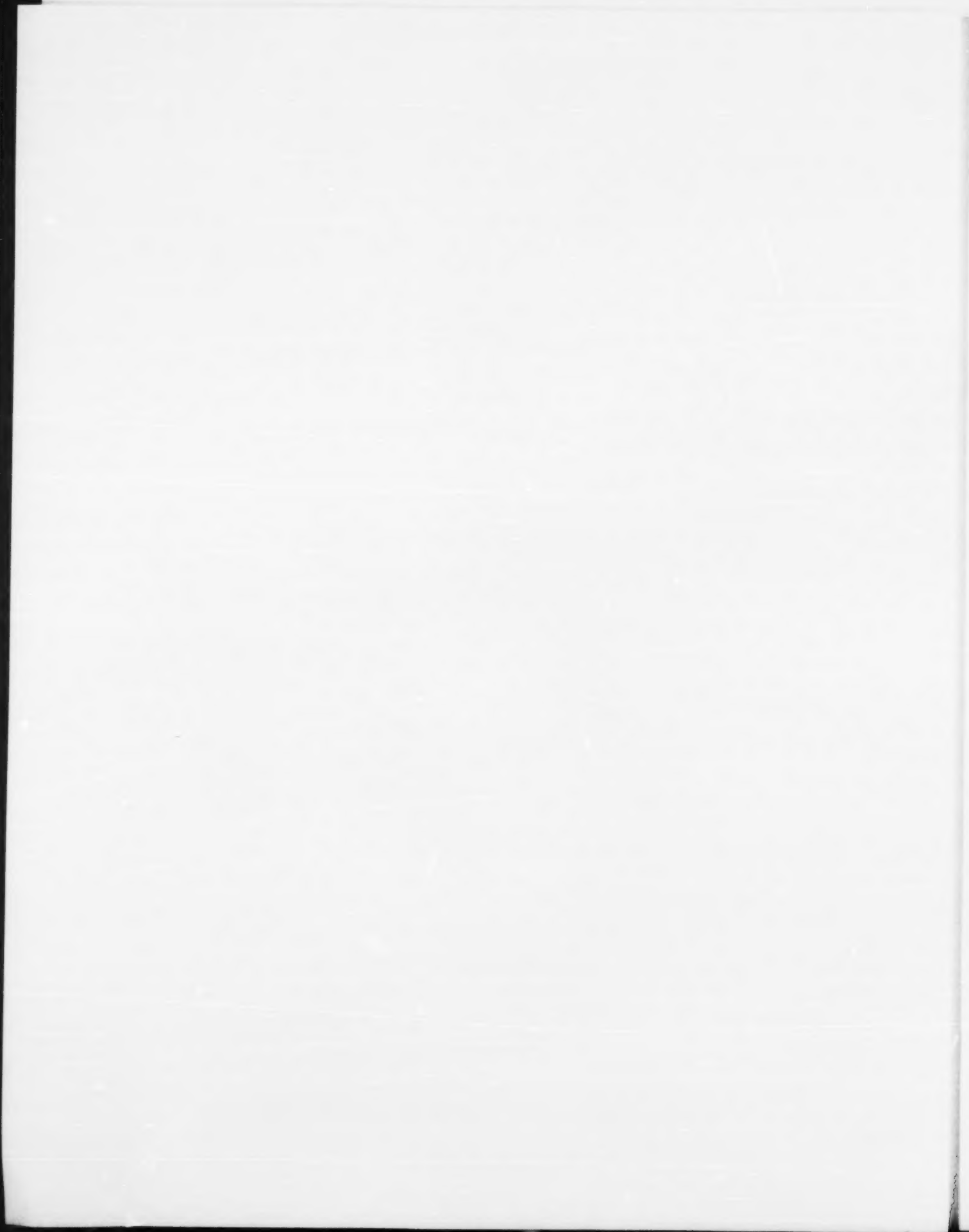
	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES	26	25	25	25	25	25	25
MAXIMUM	0.5500	16.00	72.00	67.88	1300.00	44.94	1.00
MINIMUM	0.0000	0.50	0.50	1.23	5.96	3.89	0.20
RANGE	0.5500	15.50	71.50	66.65	1294.04	41.05	0.80
ARITH. MEAN	0.0333	2.96	17.89	11.44	153.55	13.46	0.81
ARITH. STD. DEV	0.1064	3.28	19.73	13.41	260.80	9.61	0.35
GEOM. MEAN	0.0127	1.98	6.51	7.56	71.24	11.00	0.68
GEOM. STD. DEV.	4.5902	2.45	6.06	2.48	3.46	1.89	2.02
1ST QUARTILE	0.0015	1.00	0.50	4.24	30.80	7.16	0.60
2ND QUARTILE	0.0090	2.00	9.00	6.23	64.06	10.77	1.00
3RD QUARTILE	0.0170	3.00	28.00	13.36	148.35	16.07	1.00
VOL. WGT. MEAN	0.0430	2.83	15.52	9.13	105.92	11.42	0.84

	ALUMINIUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES	25	25	25
MAXIMUM	456.20	121.40	25.00
MINIMUM	8.14	0.77	0.05
RANGE	448.06	120.63	24.95
ARITH. MEAN	73.84	30.35	1.42
ARITH. STD. DEV	88.20	32.49	4.93
GEOM. MEAN	49.24	13.53	0.37
GEOM. STD. DEV.	2.46	4.57	3.43
1ST QUARTILE	27.46	4.56	0.20
2ND QUARTILE	49.97	15.15	0.30
3RD QUARTILE	85.30	44.24	0.70
VOL. WGT. MEAN	58.71	24.90	1.15

PART IX

SUMMARY STATISTICS OF WET DEPOSITION BY STATION

1984



ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
MAXIMUM	11	10	10	10	10	9	10
MINIMUM	122.0	6.7044	9.1744	353.80	44.800	17.820	112.200
RANGE	21.5	0.6697	1.6416	45.60	4.560	1.710	1.140
ARITH. MEAN	100.5	6.0347	7.5328	308.20	40.240	16.110	111.060
ARITH. STD. DEV.	62.0	3.5577	5.1307	169.43	28.891	8.778	28.636
GEOM. MEAN	33.2	2.0089	2.5086	109.43	14.015	4.759	35.089
GEOM. STD. DEV.	54.2	2.9643	4.5518	137.04	23.531	7.391	14.852
1ST QUARTILE	1.7	2.0076	1.7106	2.04	2.237	1.998	3.624
2ND QUARTILE	32.8	1.8409	3.0066	71.87	15.701	5.708	8.383
3RD QUARTILE	49.7	3.2689	4.8661	135.34	32.665	8.041	12.640
VOL. WGT. MEAN	78.5	4.4797	6.1410	249.42	36.920	9.287	29.826
	*****	3.4240	4.9378	163.06	27.805	8.027	27.559

# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
MAXIMUM	9	9	9	9	10	9	9
MINIMUM	37.820	2.835	3.240	44.080	31.110	0.5600	0.2430
RANGE	6.840	0.000	0.000	0.000	0.000	0.0285	0.0212
ARITH. MEAN	30.980	2.835	3.240	44.080	31.110	0.5315	0.2218
ARITH. STD. DEV.	23.421	1.445	1.109	13.352	15.759	0.3033	0.0981
GEOM. MEAN	11.837	0.839	1.175	17.030	11.003	0.2172	0.0671
GEOM. STD. DEV.	20.387	1.431	0.767	6.971	11.262	0.2049	0.0778
1ST QUARTILE	1.807	1.529	3.008	2.734	1.950	2.9622	2.1605
2ND QUARTILE	13.468	0.928	0.185	3.205	6.380	0.0924	0.0422
3RD QUARTILE	17.820	1.306	0.425	5.382	12.662	0.2437	0.0855
VOL. WGT. MEAN	33.550	1.600	1.542	8.493	24.482	0.4625	0.1147
	21.714	1.322	1.015	12.209	15.167	0.2812	0.0897

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	9	9	9	9	9	9	9
MAXIMUM	0.5590	0.673	4.8741	0.8419	0.122	4.462	1.1475
MINIMUM	0.0212	0.070	0.3398	0.2229	0.006	0.464	0.0514
RANGE	0.5378	0.603	4.5343	0.6190	0.116	3.998	1.0961
ARITH. MEAN	0.1328	0.348	2.2095	0.4787	0.058	1.961	0.3275
ARITH. STD. DEV.	0.1743	0.202	1.3979	0.1814	0.041	1.210	0.3437
GEOM. MEAN	0.0733	0.289	1.7710	0.4485	0.042	1.648	0.2168
GEOM. STD. DEV.	2.9903	2.022	2.1858	1.4768	2.701	1.919	2.5971
1ST QUANTILE	0.0310	0.198	1.2666	0.3339	0.018	1.209	0.1078
2ND QUANTILE	0.0482	0.296	1.7222	0.4566	0.050	1.463	0.1637
3RD QUANTILE	0.1256	0.386	2.4491	0.5248	0.074	2.152	0.3354
VOL. WGT. MEAN	0.1214	0.318	2.0204	0.4378	0.053	1.793	0.2994

CADMIUM

	MG/MM#2
# OF SAMPLES	9
MAXIMUM	0.02795
MINIMUM	0.00285
RANGE	0.02510
ARITH. MEAN	0.01178
ARITH. STD. DEV.	0.00721
GEOM. MEAN	0.00997
GEOM. STD. DEV.	1.88873
1ST QUANTILE	0.00715
2ND QUANTILE	0.00988
3RD QUANTILE	0.01246
VOL. WGT. MEAN	0.01077

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/H#*2	TOTAL H+ TO PH8.3 MG/H#*2	SULPHATE MG/H#*2	NITRATE AS N MG/H#*2	CALCIUM MG/H#*2	CHLORIDE MG/H#*2
# OF SAMPLES	10	10	9	10	10	10	10
MAXIMUM	141.0	9.6677	13.2534	672.75	126.360	274.950	84.750
MINIMUM	14.0	1.0378	1.4952	56.00	13.160	15.390	10.640
RANGE	127.0	8.6299	11.7582	616.75	113.200	259.560	74.110
ARITH. MEAN	83.4	4.2151	6.8049	367.14	55.205	52.508	31.293
ARITH. STD. DEV.	37.7	2.4672	3.3755	205.16	30.204	78.842	26.624
GEOM. MEAN	72.1	3.5884	5.9898	301.36	47.786	32.630	24.493
GEOM. STD. DEV.	1.9	1.8684	1.8613	2.11	1.827	2.337	1.987
1ST QUARTILE	55.5	2.2508	4.7220	196.04	32.565	15.610	14.895
2ND QUARTILE	78.3	3.8400	6.2127	298.60	54.458	31.247	21.505
3RD QUARTILE	112.0	4.7765	7.7802	549.62	59.835	37.560	23.490
VOL. WGT. MEAN	*****	4.2151	7.1680	367.14	55.204	52.508	31.293

	KJELDAHL AS N MG/H#*2	MAGNESIUM MG/H#*2	POTASSIUM MG/H#*2	SODIUM MG/H#*2	AMMONIUM AS N MG/H#*2	PHOSPHOR MG/H#*2	MANGANESE MG/H#*2
# OF SAMPLES	10	10	10	10	10	10	10
MAXIMUM	124.600	52.650	18.900	42.375	112.000	7.6050	4.3290
MINIMUM	5.180	2.170	0.280	2.280	3.976	0.2850	0.1710
RANGE	119.420	50.480	18.620	40.095	108.024	7.3200	4.1580
ARITH. MEAN	66.134	10.066	5.802	13.854	55.350	2.0447	0.7773
ARITH. STD. DEV.	36.310	15.113	5.459	13.550	32.393	2.4505	1.2591
GEOM. MEAN	51.122	6.149	3.575	9.677	41.847	1.2236	0.4504
GEOM. STD. DEV.	2.549	2.426	3.322	2.391	2.645	2.7799	2.4561
1ST QUARTILE	29.514	3.360	1.635	5.515	24.465	0.5150	0.2530
2ND QUARTILE	74.105	5.538	4.852	8.925	58.402	1.1550	0.3765
3RD QUARTILE	85.000	7.305	6.847	11.756	72.072	1.4265	0.4600
VOL. WGT. MEAN	66.134	10.066	5.802	13.854	55.350	2.0447	0.7773

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	HG/M**2	HG/M**2	HG/M**2	HG/M**2	HG/M**2	HG/M**2	HG/M**2
# OF SAMPLES	10	10	10	10	10	10	10
MAXIMUM	0.2340	3.306	51.3981	1.1409	0.141	63.063	0.4204
MINIMUM	0.0280	0.210	1.3230	0.1821	0.011	1.089	0.0561
RANGE	0.2060	3.096	50.0751	0.9587	0.130	61.974	0.3643
ARITH. MEAN	0.0657	1.045	8.3672	0.6773	0.068	9.595	0.1449
ARITH. STD. DEV.	0.0637	0.886	15.2028	0.2793	0.045	18.846	0.1155
GEOM. MEAN	0.0502	0.797	4.2885	0.6124	0.052	4.409	0.1160
GEOM. STD. DEV.	2.0004	2.177	2.6679	1.6807	2.342	2.890	1.9385
1ST QUARTILE	0.0285	0.429	2.5699	0.4833	0.025	2.361	0.0681
2ND QUARTILE	0.0389	0.869	3.5618	0.6701	0.067	3.814	0.0998
3RD QUARTILE	0.0630	1.091	4.4129	0.8013	0.098	4.827	0.1639
VOL. WGT. MEAN	0.0657	1.045	8.3672	0.6773	0.068	9.595	0.1449

CADMIUM

	HG/M**2
# OF SAMPLES	10
MAXIMUM	0.04520
MINIMUM	0.00140
RANGE	0.04380
ARITH. MEAN	0.01570
ARITH. STD. DEV.	0.01426
GEOM. MEAN	0.01046
GEOM. STD. DEV.	2.78684
1ST QUARTILE	0.00569
2ND QUARTILE	0.00974
3RD QUARTILE	0.01815
VOL. WGT. MEAN	0.01570

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH6.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
# OF SAMPLES	10	10	10	10	10	9	9
MAXIMUM	146.0	11.0353	15.3300	1080.40	111.320	276.000	60.044
MINIMUM	11.6	0.0031	0.6555	60.90	18.328	23.780	23.958
RANGE	134.4	11.0322	14.6745	1019.50	92.992	252.220	36.086
ARITH. MEAN	73.9	2.9046	5.0405	514.66	54.371	140.559	36.775
ARITH. STD. DEV	39.9	4.1953	5.4040	322.40	29.937	70.083	11.305
GEOM. MEAN	61.4	0.2940	2.8876	405.77	47.167	119.468	35.319
GEOM. STD. DEV.	2.1	20.4742	3.1395	2.29	1.773	2.009	1.350
1ST QUANTILE	38.0	0.0177	0.9607	282.24	29.774	96.835	25.380
2ND QUANTILE	72.1	0.2091	2.2456	444.24	43.262	139.011	37.345
3RD QUANTILE	87.6	3.9922	6.3360	645.89	74.508	155.425	38.973
VOL. WGT. MEAN	*****	2.9046	5.0405	514.66	54.371	143.375	33.625

	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
# OF SAMPLES	9	9	9	8	10	9	9
MAXIMUM	154.760	38.115	43.575	30.905	107.310	17.4300	1.0220
MINIMUM	16.356	5.800	0.326	6.534	14.500	0.3132	0.1856
RANGE	138.404	32.315	43.248	24.371	92.810	17.1168	0.8364
ARITH. MEAN	73.411	28.105	8.831	11.476	60.867	3.4622	0.5664
ARITH. STD. DEV	44.767	10.563	13.319	7.971	32.060	5.4468	0.2931
GEOM. MEAN	60.731	25.076	4.033	10.076	51.563	1.5276	0.4959
GEOM. STD. DEV.	1.998	1.818	4.168	1.619	1.935	3.7419	1.7645
1ST QUANTILE	40.704	22.359	2.135	7.606	28.227	0.5164	0.3218
2ND QUANTILE	55.368	28.539	4.735	9.345	58.696	1.0070	0.4819
3RD QUANTILE	91.657	34.850	6.778	10.231	87.305	2.8487	0.6572
VOL. WGT. MEAN	74.882	28.669	9.008	10.593	60.867	3.5316	0.5347

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	9	9	9	9	9	9	9
MAXIMUM	0.2145	5.005	25.2726	5.2802	1.072	31.492	2.5764
MINIMUM	0.0763	1.127	3.1691	0.5845	0.087	4.132	0.2910
RANGE	0.1782	3.877	22.1035	4.6957	0.985	27.361	2.2854
ARITH. MEAN	0.0873	2.345	9.1996	1.9970	0.345	9.654	1.2357
ARITH. STD. DEV.	0.0522	1.224	6.8340	1.4479	0.302	8.639	0.7300
GEOM. MEAN	0.0770	2.122	7.4963	1.6176	0.262	7.633	1.0389
GEOM. STD. DEV.	1.6704	1.576	1.9424	1.9958	2.157	1.944	1.9359
1ST QUARTILE	0.0520	1.599	3.8426	0.9953	0.137	4.173	0.7350
2ND QUARTILE	0.0780	1.877	7.5611	1.5761	0.225	6.415	0.9518
3RD QUARTILE	0.0888	2.181	9.2214	1.9189	0.397	9.157	1.3675
VOL. WGT. MEAN	0.0824	2.214	8.6849	1.8852	0.326	9.114	1.1666

CADMIUM

	MG/MM#2
# OF SAMPLES	9
MAXIMUM	0.01460
MINIMUM	0.00726
RANGE	0.00734
ARITH. MEAN	0.01095
ARITH. STD. DEV.	0.00281
GEOM. MEAN	0.01063
GEOM. STD. DEV.	1.30250
1ST QUARTILE	0.00839
2ND QUARTILE	0.01015
3RD QUARTILE	0.01267
VOL. WGT. MEAN	0.01034

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
# OF SAMPLES :	6	5	5	5	5	5	5
MAXIMUM :	103.0	8.6465	11.5662	359.49	91.696	28.655	106.260
MINIMUM :	18.2	0.7141	1.5698	51.77	4.676	4.676	6.880
RANGE :	84.8	7.9324	9.9964	307.72	87.020	23.979	99.580
ARITH. MEAN :	43.9	3.9531	5.8988	166.01	41.847	13.202	48.476
ARITH. STD. DEV :	31.2	3.4308	4.6733	137.95	34.335	10.197	41.252
GEOM. MEAN :	36.9	2.7292	4.4237	122.67	28.024	10.427	30.396
GEOM. STD. DEV. :	1.9	2.7633	2.3857	2.41	3.157	2.141	3.379
1ST QUARTILE :	20.6	1.2332	2.2055	54.76	12.845	5.572	8.510
2ND QUARTILE :	33.4	1.9530	3.0084	78.08	26.562	7.070	33.304
3RD QUARTILE :	42.8	4.3263	6.7584	180.53	45.924	13.106	59.549
VOL. WGT. MEAN :	*****	3.5390	5.2809	148.62	37.464	11.819	43.398

	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
# OF SAMPLES :	5	5	5	5	5	5	4
MAXIMUM :	45.327	3.907	4.168	89.628	35.949	5.6650	0.8336
MINIMUM :	6.012	0.924	0.250	5.177	1.503	0.0500	0.0667
RANGE :	39.315	2.983	3.917	84.451	34.446	5.6150	0.7669
ARITH. MEAN :	21.686	2.052	1.784	41.424	13.431	1.5004	0.2933
ARITH. STD. DEV :	17.393	1.361	1.582	36.673	13.457	2.3492	0.3661
GEOM. MEAN :	16.321	1.717	1.200	23.437	8.438	0.5366	0.1663
GEOM. STD. DEV. :	2.357	1.941	2.953	3.969	3.238	5.5646	3.3157
1ST QUARTILE :	8.203	0.962	0.587	5.340	3.839	0.1752	0.0668
2ND QUARTILE :	11.035	1.168	0.962	24.897	7.641	0.4507	0.1364
3RD QUARTILE :	23.347	2.213	1.788	53.405	11.963	0.7434	0.5198
VOL. WGT. MEAN :	19.414	1.837	1.597	37.085	12.024	1.3433	0.2319

***** : INSUFFICIENT DATA

NOTE (1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE (2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART 111) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	4	4	4	4	4	4	4
MAXIMUM	3.2823	3.537	21.0797	2.3414	0.052	7.904	3.8491
MINIMUM	0.0167	0.649	1.4152	0.2480	0.007	1.188	0.1574
RANGE	3.2656	2.888	19.6645	2.0934	0.045	6.715	3.6918
ARITH. MEAN	1.4376	1.585	7.3320	1.4090	0.028	4.498	2.2899
ARITH. STD. DEV	1.4217	1.339	9.2979	0.9243	0.019	3.516	1.6945
GEOM. MEAN	0.5092	1.252	4.0845	1.0583	0.022	3.294	1.3752
GEOM. STD. DEV.	10.6432	2.143	3.3804	2.7621	2.421	2.628	4.4298
1ST QUARTILE	0.3586	0.714	1.6506	0.6859	0.014	1.472	0.9383
2ND QUARTILE	1.2257	1.077	3.4165	1.5234	0.027	4.450	2.5766
3RD QUARTILE	2.5167	2.455	13.0134	2.1322	0.043	7.524	3.6416
VOL. WGT. MEAN	1.1368	1.253	5.7979	1.1142	0.022	3.557	1.8108

CADMIUM

	MG/MM#2
# OF SAMPLES	4
MAXIMUM	1.30250
MINIMUM	0.00668
RANGE	1.29582
ARITH. MEAN	0.35725
ARITH. STD. DEV	0.83076
GEOM. MEAN	0.07383
GEOM. STD. DEV.	8.82190
1ST QUARTILE	0.02669
2ND QUARTILE	0.05991
3RD QUARTILE	0.68781
VOL. WGT. MEAN	0.28250

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH6.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
# OF SAMPLES	13	12	12	12	12	11	12
MAXIMUM	145.0	8.3439	11.8320	589.26	61.732	54.280	42.700
MINIMUM	20.0	0.0067	2.0680	53.43	6.903	3.600	2.000
RANGE	125.0	8.3392	9.7640	535.83	54.829	50.680	40.700
ARITH. MEAN	65.4	3.6910	5.8764	236.32	29.989	16.393	18.612
ARITH. STD. DEV.	43.2	2.7418	3.3810	171.43	15.169	15.336	11.556
GEOM. MEAN	53.3	1.9455	5.0670	104.55	25.488	11.662	14.499
GEOM. STD. DEV.	2.0	7.2894	1.7691	2.12	1.943	2.347	2.335
1ST QUANTILE	28.4	1.8292	3.2751	117.06	19.394	5.218	10.342
2ND QUANTILE	46.1	2.8352	5.1045	167.62	31.595	9.670	17.518
3RD QUANTILE	81.0	5.4518	7.9394	373.75	37.280	18.335	24.427
VOL. WGT. MEAN	*****	3.5713	5.6859	228.66	29.017	15.048	18.009

	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
# OF SAMPLES	12	11	11	11	12	12	12
MAXIMUM	653.200	17.480	98.440	28.000	524.400	50.6000	0.8418
MINIMUM	6.903	0.737	0.074	0.500	0.531	0.0000	0.0400
RANGE	646.297	16.742	98.366	27.500	523.869	50.6000	0.8018
ARITH. MEAN	81.767	3.453	11.620	10.981	63.652	4.9952	0.2139
ARITH. STD. DEV.	182.024	4.977	29.247	8.742	146.302	14.4007	0.2740
GEOM. MEAN	28.321	1.984	1.127	6.977	17.833	0.9513	0.1241
GEOM. STD. DEV.	3.556	2.654	9.121	3.339	5.135	5.4305	2.7315
1ST QUANTILE	10.810	0.848	0.154	3.122	9.300	0.2202	0.0539
2ND QUANTILE	23.800	1.670	0.627	8.573	20.529	0.6120	0.1204
3RD QUANTILE	45.575	2.410	5.166	14.098	32.240	1.1848	0.1718
VOL. WGT. MEAN	79.117	3.169	10.667	10.080	61.589	4.8333	0.2070

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LIVERY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	4.2090	1.772	32.7600	1.9198	0.145	11.496	5.8786
MINIMUM	0.1600	0.118	1.4316	0.1088	0.006	0.764	0.1088
RANGE	4.0490	1.654	31.3284	1.8110	0.139	10.732	5.7698
ARITH. MEAN	1.5586	0.493	10.2940	0.7854	0.061	5.019	2.4604
ARITH. STD. DEV.	1.2112	0.435	9.1765	0.4790	0.049	3.508	1.9166
GEOM. MEAN	1.0664	0.385	7.1367	0.6404	0.042	3.749	1.5571
GEOM. STD. DEV.	2.7615	2.015	2.5375	2.0977	2.693	2.387	3.3547
1ST QUARTILE	0.4740	0.227	3.8486	0.5021	0.023	1.946	0.8431
2ND QUARTILE	1.5688	0.381	7.3801	0.7219	0.045	4.483	2.2492
3RD QUARTILE	2.2616	0.585	13.8487	0.9971	0.099	8.090	3.6473
VOL. WGT. MEAN	1.5081	0.477	9.9603	0.7599	0.059	4.857	2.3806

CADMIUM

	MG/MM#2
# OF SAMPLES	12
MAXIMUM	0.08280
MINIMUM	0.00600
RANGE	0.07680
ARITH. MEAN	0.03026
ARITH. STD. DEV.	0.02243
GEOM. MEAN	0.02275
GEOM. STD. DEV.	2.32793
1ST QUARTILE	0.01337
2ND QUARTILE	0.02859
3RD QUARTILE	0.03713
VOL. WGT. MEAN	0.02928

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.
PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH# 3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
# OF SAMPLES	13	13	12	13	13	13	13
MAXIMUM	130.0	7.3198	10.0104	487.50	78.000	111.800	52.000
MINIMUM	15.8	1.2843	1.8138	64.90	10.902	7.742	8.058
RANGE	114.2	6.0355	8.1966	422.60	67.098	104.058	43.942
ARITH. MEAN	70.3	4.0756	6.1557	280.89	41.151	39.107	21.033
ARITH. STD. DEV.	33.8	1.9108	2.7301	131.61	18.456	31.884	12.243
GEOM. MEAN	60.7	3.5599	5.4807	241.44	36.824	28.232	18.239
GEOM. STD. DEV.	1.9	1.8003	1.7223	1.91	1.692	2.401	1.738
1ST QUANTILE	45.5	2.3803	4.3742	194.11	27.475	11.245	10.900
2ND QUANTILE	67.0	3.9370	6.4028	277.92	37.450	35.633	18.090
3RD QUANTILE	90.5	5.0780	8.2954	335.77	48.000	43.086	24.285
VOL. WGT. MEAN	*****	4.0756	6.4282	280.89	41.151	39.107	21.033

	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHOR MG/MM#2	MANGANESE MG/MM#2
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	67.150	24.700	3.900	15.600	55.300	3.2500	2.4070
MINIMUM	10.780	1.501	0.110	1.080	8.453	0.0820	0.0632
RANGE	56.370	23.199	3.790	14.520	46.847	3.1680	2.3438
ARITH. MEAN	35.363	8.886	1.927	6.243	28.952	0.9251	0.4912
ARITH. STD. DEV.	17.125	7.238	1.116	4.602	17.072	0.9984	0.6283
GEOM. MEAN	30.978	6.360	1.377	4.616	25.644	0.5486	0.2976
GEOM. STD. DEV.	1.776	2.467	2.957	2.395	1.746	3.0150	2.7397
1ST QUANTILE	24.110	3.185	1.066	2.007	19.410	0.3000	0.1500
2ND QUANTILE	32.124	6.745	2.003	5.325	29.600	0.4570	0.3095
3RD QUANTILE	41.880	9.965	2.510	6.972	33.615	0.9236	0.3975
VOL. WGT. MEAN	35.363	8.886	1.927	6.243	28.952	0.9251	0.4912

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH
NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
API03 - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.0650	1.208	29.3488	1.0525	0.130	37.259	0.1362
MINIMUM	0.0063	0.215	0.4677	0.1566	0.013	0.512	0.0156
RANGE	0.0587	0.992	28.8811	0.8959	0.117	36.747	0.1207
ARITH. MEAN	0.0334	0.532	6.5949	0.5192	0.061	7.155	0.0681
ARITH. STD. DEV.	0.0164	0.257	8.1631	0.2599	0.037	10.178	0.0329
GEOM. MEAN	0.0286	0.482	3.8311	0.4594	0.049	3.799	0.0593
GEOM. STD. DEV.	1.9235	1.588	2.9821	1.7099	2.117	3.103	1.8171
1ST QUARTILE	0.0217	0.367	2.2632	0.3863	0.022	2.123	0.0390
2ND QUARTILE	0.0309	0.474	3.9528	0.4487	0.054	3.379	0.0683
3RD QUARTILE	0.0422	0.597	4.9076	0.5464	0.084	5.219	0.0810
VOL. WGT. MEAN	0.0334	0.532	6.5949	0.5192	0.061	7.155	0.0681

CADMIUM

	MG/M**2
# OF SAMPLES	13
MAXIMUM	0.03440
MINIMUM	0.00220
RANGE	0.03220
ARITH. MEAN	0.01096
ARITH. STD. DEV.	0.00968
GEOM. MEAN	0.00801
GEOM. STD. DEV.	2.27498
1ST QUARTILE	0.00536
2ND QUARTILE	0.00795
3RD QUARTILE	0.00899
VOL. WGT. MEAN	0.01096

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/H#*2	TOTAL H+ TO PH8.3 MG/H#*2	SULPHATE MG/H#*2	NITRATE AS N MG/H#*2	CALCIUM MG/H#*2	CHLORIDE MG/H#*2
12	12	11	11	12	12	12	12
MAXIMUM	94.6	5.9305	8.8480	529.76	96.492	378.400	473.000
MINIMUM	21.0	0.0012	0.6696	108.15	14.905	19.441	3.240
RANGE	73.6	5.9293	8.1784	421.61	81.587	358.959	469.760
ARITH. MEAN	52.3	1.9414	3.2439	264.18	39.527	91.691	94.900
ARITH. STD. DEV.	23.5	2.0244	2.7149	136.74	21.998	97.452	141.863
GEOM. MEAN	47.5	0.3466	2.3243	233.90	34.840	66.348	37.072
GEOM. STD. DEV.	1.6	21.9286	2.4126	1.68	1.685	2.173	4.208
1ST QUARTILE	34.2	0.0061	0.8565	159.27	23.515	47.280	16.470
2ND QUARTILE	45.0	1.2512	1.9370	235.80	35.840	58.400	21.600
3RD QUARTILE	74.0	3.2921	4.2522	346.00	45.990	98.240	141.620
VOL. WGT. MEAN	*****	1.8722	3.3353	264.18	39.527	91.691	94.900

# OF SAMPLES	KJELDAHL AS N MG/H#*2	MAGNESIUM MG/H#*2	POTASSIUM MG/H#*2	SODIUM MG/H#*2	AMMONIUM AS N MG/H#*2	PHOSPHOR MG/H#*2	MANGANESE MG/H#*2
12	12	12	12	12	12	12	12
MAXIMUM	57.600	45.408	6.149	283.800	48.400	1.4190	1.5136
MINIMUM	14.280	2.592	0.162	0.648	10.904	0.0420	0.0972
RANGE	43.320	42.816	5.987	283.152	37.496	1.3770	1.4164
ARITH. MEAN	31.487	14.743	2.756	57.549	26.486	0.5447	0.4713
ARITH. STD. DEV.	15.331	11.480	1.639	86.405	12.659	0.4663	0.3650
GEOM. MEAN	28.182	11.696	2.067	16.093	23.656	0.3303	0.3833
GEOM. STD. DEV.	1.641	2.046	2.684	6.407	1.662	3.3271	1.9276
1ST QUARTILE	19.152	8.902	1.817	4.170	15.936	0.1440	0.2905
2ND QUARTILE	26.500	10.802	2.840	12.210	23.530	0.4605	0.3660
3RD QUARTILE	46.309	17.120	3.590	86.640	38.293	0.9000	0.4560
VOL. WGT. MEAN	31.487	14.743	2.756	57.549	26.486	0.5447	0.4713

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	0.0816	4.651	24.2933	5.4802	0.095	15.713	0.7875
MINIMUM	0.0155	0.225	0.9724	0.3516	0.013	1.407	0.0316
RANGE	0.0661	4.425	23.3209	5.1286	0.082	14.307	0.7559
ARITH. MEAN	0.0325	1.476	7.1479	1.9265	0.048	5.884	0.2929
ARITH. STD. DEV.	0.0188	1.253	6.3176	1.5433	0.025	4.008	0.2134
GEOM. MEAN	0.0287	1.100	5.2780	1.4550	0.042	4.762	0.2251
GEOM. STD. DEV.	1.6509	2.258	2.2901	2.2188	1.752	2.011	2.2926
1ST QUANTILE	0.0195	0.655	3.3141	0.7646	0.032	2.683	0.1501
2ND QUANTILE	0.0265	1.156	5.2269	1.4896	0.039	5.087	0.2557
3RD QUANTILE	0.0400	1.731	9.1320	2.3369	0.069	8.334	0.3333
VOL. WGT. MEAN	0.0325	1.476	7.1479	1.9265	0.068	5.884	0.2929

CADMIUM

	MG/M**2
# OF SAMPLES	12
MAXIMUM	0.79800
MINIMUM	0.00324
RANGE	0.79476
ARITH. MEAN	0.07732
ARITH. STD. DEV.	0.22714
GEOM. MEAN	0.01371
GEOM. STD. DEV.	4.17136
1ST QUANTILE	0.00688
2ND QUANTILE	0.00940
3RD QUANTILE	0.01590
VOL. WGT. MEAN	0.07732

PART X

SUMMARY STATISTICS OF WET DEPOSITION BY REGION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP.		FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB	MG/MM#2	TO PH8.3 MG/MM#2	MG/MM#2	AS N MG/MM#2	MG/MM#2	MG/MM#2
# OF SAMPLES	23		23	21	23	23	23	23
MAXIMUM	141.0		9.6677	13.2534	672.75	126.360	274.950	84.750
MINIMUM	14.0		1.0378	1.4952	56.00	10.902	7.742	8.058
RANGE	127.0		8.6299	11.7582	616.75	115.458	267.208	76.692
ARITH. MEAN	76.0		4.1362	6.4682	318.39	47.261	44.934	25.494
ARITH. STD. DEV	35.3		2.1182	2.9654	169.05	24.693	56.067	19.970
GEOM. MEAN	65.4		3.5723	5.6933	265.87	41.242	30.066	20.733
GEOM. STD. DEV.	1.9		1.8045	1.7590	1.98	1.756	2.334	1.855
1ST QUARTILE	52.0		2.2508	4.4853	196.04	29.595	15.395	12.210
2ND QUARTILE	75.0		3.8400	6.2127	283.57	45.615	34.322	19.850
3RD QUARTILE	101.3		5.1680	7.8024	433.72	57.105	42.141	26.520
VOL. WGT. MEAN	*****		4.1362	6.7522	318.39	47.261	44.934	25.494

	KJELDAHL		MAGNESIUM	POTASSIUM	SODIUM	AMMONIUM	PHOSPHOR	MANGANESE
	AS N	MG/MM#2	MG/MM#2	MG/MM#2	MG/MM#2	AS N	MG/MM#2	MG/MM#2
# OF SAMPLES	23	23	23	23	23	23	23	23
MAXIMUM	124.600	52.650	18.900	42.375	112.000	7.6050	4.3290	
MINIMUM	5.180	1.501	0.110	1.080	3.976	0.0820	0.0632	
RANGE	119.420	51.149	18.790	41.295	108.024	7.5230	4.2658	
ARITH. MEAN	48.741	9.399	3.612	9.552	40.429	1.4119	0.6156	
ARITH. STD. DEV	30.701	11.062	4.090	10.077	26.486	1.8227	0.9407	
GEOM. MEAN	38.516	6.267	2.085	6.368	31.729	0.7776	0.3563	
GEOM. STD. DEV.	2.174	2.400	3.354	2.538	2.195	3.0688	2.6211	
1ST QUARTILE	29.514	3.300	1.320	3.462	21.550	0.3400	0.2140	
2ND QUARTILE	37.550	5.871	2.285	6.515	31.662	0.6620	0.3385	
3RD QUARTILE	70.495	9.328	4.170	10.320	53.030	1.4265	0.4530	
VOL. WGT. MEAN	48.741	9.399	3.612	9.552	40.429	1.4119	0.6156	

***** : INSUFFICIENT DATA

NOTE(1) : PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2) : THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2
# OF SAMPLES	23	23	23	23	23	23	23
MAXIMUM	0.2340	3.306	51.3981	1.1409	0.141	63.063	0.4204
MINIMUM	0.0063	0.210	0.4677	0.1566	0.011	0.512	0.0156
RANGE	0.2277	3.096	50.9304	0.9843	0.130	62.551	0.4048
ARITH. MEAN	0.0475	0.755	7.3655	0.5879	0.064	8.216	0.1015
ARITH. STD. DEV.	0.0455	0.652	11.4763	0.2742	0.040	14.260	0.0870
GEOM. MEAN	0.0365	0.600	4.0237	0.5205	0.050	4.053	0.0794
GEOM. STD. DEV.	2.0450	1.926	2.7840	1.7111	2.175	2.944	2.0135
1ST QUARTILE	0.0277	0.367	2.4644	0.4063	0.022	3.179	0.0569
2ND QUARTILE	0.0337	0.538	3.9274	0.5344	0.059	3.776	0.0774
3RD QUARTILE	0.0479	0.884	5.0969	0.7708	0.090	5.860	0.1027
VOL. WGT. MEAN	0.0475	0.755	7.3655	0.5879	0.064	8.216	0.1015

CADMIUM

	MG/H**2
# OF SAMPLES	23
MAXIMUM	0.04520
MINIMUM	0.00140
RANGE	0.04380
ARITH. MEAN	0.01303
ARITH. STD. DEV.	0.01184
GEOM. MEAN	0.00900
GEOM. STD. DEV.	2.46853
1ST QUARTILE	0.00536
2ND QUARTILE	0.00839
3RD QUARTILE	0.01671
VOL. WGT. MEAN	0.01303

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ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 1

	# OF SAMPLES	PRECIP. MM	FREE H+ LAB MG/MM#2	TOTAL H+ TO PH8.3 MG/MM#2	SULPHATE MG/MM#2	NITRATE AS N MG/MM#2	CALCIUM MG/MM#2	CHLORIDE MG/MM#2
	30	27	27	27	27	27	25	27
MAXIMUM	145.0	8.6465	11.8320	589.26	91.696	54.280	112.200	112.200
MINIMUM	6.6	0.0047	0.6289	19.49	4.162	1.519	1.140	1.140
RANGE	138.4	8.6417	11.2031	569.77	87.534	52.761	111.060	111.060
ARITH. MEAN	59.0	3.6262	5.5100	195.60	31.154	12.767	27.548	27.548
ARITH. STD. DEV.	38.2	2.5929	3.3508	146.74	19.884	11.794	29.659	29.659
GEOM. MEAN	47.2	2.2801	4.4724	144.33	23.718	9.070	15.801	15.801
GEOM. STD. DEV.	2.0	4.3313	2.0347	2.33	2.361	2.364	3.192	3.192
1ST QUANTILE	28.4	1.7148	2.8962	68.32	13.240	5.432	8.010	8.010
2ND QUANTILE	47.3	2.7397	4.7659	145.81	31.595	8.528	13.748	13.748
3RD QUANTILE	78.5	5.7637	7.5082	282.40	38.520	16.974	37.520	37.520
VOL. WGT. MEAN	*****	3.4490	5.2408	186.05	29.632	11.672	26.202	26.202

	# OF SAMPLES	KJELDAHL AS N MG/MM#2	MAGNESIUM MG/MM#2	POTASSIUM MG/MM#2	SODIUM MG/MM#2	AMMONIUM AS N MG/MM#2	PHOSPHORUS MG/MM#2	MANGANESE MG/MM#2
	26	25	25	25	25	27	26	25
MAXIMUM	653.200	17.480	98.440	89.628	524.400	50.6000	0.8418	0.8418
MINIMUM	2.312	0.000	0.000	0.000	0.000	0.000	0.0132	0.0132
RANGE	650.888	17.480	98.440	89.628	524.400	50.6000	0.8286	0.8286
ARITH. MEAN	49.656	2.418	5.837	17.746	36.331	2.6975	0.1828	0.1828
ARITH. STD. DEV.	124.911	3.444	19.615	22.429	98.750	9.8508	0.2419	0.2419
GEOM. MEAN	21.361	1.606	0.931	8.330	12.333	0.4710	0.1030	0.1030
GEOM. STD. DEV.	2.955	2.344	5.301	3.601	3.696	5.5687	2.8450	2.8450
1ST QUANTILE	10.516	0.905	0.205	4.025	5.710	0.0924	0.0539	0.0539
2ND QUANTILE	18.154	1.512	0.647	7.187	12.064	0.4893	0.0979	0.0979
3RD QUANTILE	35.735	2.260	2.225	19.149	29.502	0.7500	0.1453	0.1453
VOL. WGT. MEAN	46.663	2.210	5.336	16.224	34.556	2.5349	0.1667	0.1667

***** : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2	MG/H**2
# OF SAMPLES	25	25	25	25	25	25	25
MAXIMUM	4.2090	3.537	32.7600	2.3414	0.145	11.496	5.8786
MINIMUM	0.0167	0.070	0.3398	0.1088	0.001	0.235	0.0514
RANGE	4.1923	3.467	32.4202	2.2326	0.144	11.261	5.8272
ARITH. MEAN	1.0035	0.590	6.8492	0.7387	0.055	3.797	1.6101
ARITH. STD. DEV.	1.1968	0.723	8.0510	0.5737	0.043	3.164	1.7900
GEOM. MEAN	0.3387	0.393	3.7041	0.5722	0.035	2.560	0.7036
GEOM. STD. DEV.	5.8944	2.362	3.2757	2.0866	3.088	2.683	4.3341
1ST QUANTILE	0.0585	0.222	1.6025	0.3339	0.020	1.325	0.1722
2ND QUANTILE	0.3455	0.368	3.3954	0.5397	0.039	2.387	0.6665
3RD QUANTILE	1.8619	0.605	7.3801	0.8321	0.074	5.064	2.4002
VOL. WGT. MEAN	0.9150	0.538	6.2450	0.6736	0.050	3.462	1.4661

CADMIUM

	MG/H**2
# OF SAMPLES	25
MAXIMUM	1.30250
MINIMUM	0.00285
RANGE	1.29965
ARITH. MEAN	0.07442
ARITH. STD. DEV.	0.25672
GEOM. MEAN	0.01913
GEOM. STD. DEV.	3.43311
1ST QUANTILE	0.00758
2ND QUANTILE	0.01446
3RD QUANTILE	0.03046
VOL. WGT. MEAN	0.06786